SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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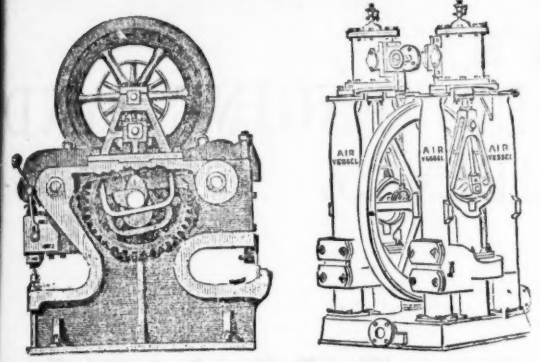

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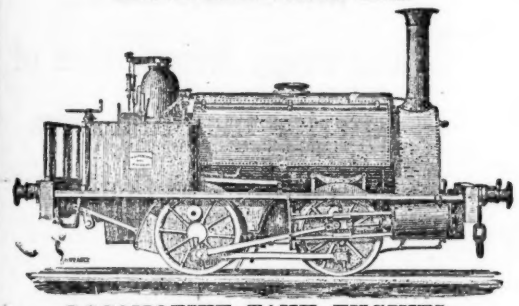

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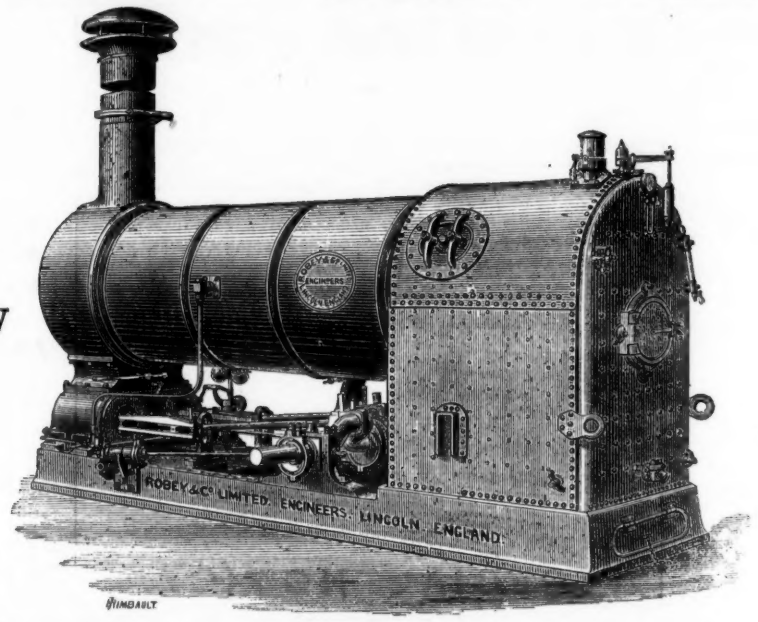

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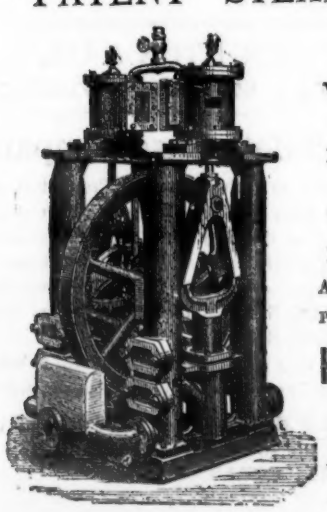

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Original Correspondence.

MINING ON THE PACIFIC COAST—NEVADA.

TYBO MINING DISTRICT, NYE COUNTY, NEVADA, AND THE TYBO CONSOLIDATED SILVER MINING COMPANY (LIMITED) OF LONDON—No. VI.

SIR,—I am extremely sorry for the break that unavoidable circumstances have caused in this correspondence. My trusty Faber is, however, at work once more, and soon will make amends to your readers, by resuming, as nearly as possible, the thread of our discourse; by depicting things as I have seen and understood them; by representing tangible facts, not baseless fancies, or highly-coloured sketches of things that cannot be sustained—and to this end invite the enquiry and attention of that large class who seek in the pages of the Journal for the reliable mining data not found elsewhere. I am not, however, quite certain whether the interior workings of the "Two G's" mines were described in my last letter; the exterior course and attributes were, I think, glanced at—therefore, to avoid repititions, I will confine my remarks to its inward appearance and development. It is opened by three tunnels and four winzes to a depth of 340 ft. from the highest outcrop of the vein. Tunnel No. 1 has a depth of 188 ft. from the apex of the lode, which it has at present penetrated longitudinally 650 ft.; No. 2, 140 ft., and same lineal extant; and No. 3 has been run 100 ft. along the ledge, about 50 ft. below its croppings. From tunnel No. 1 two winzes have been sunk 75 ft. through the vein, opening the first level, whose course is nearly south-east, through a well-formed ore body, varying in thickness between walls from 4 ft. to 8 ft., and exhibiting all the well understood characteristics of a true fissure vein. From this level a second one has been opened by two additional winzes, 77 ft. deep, making in all by winzes 152 ft., which, coupled with the distance attained by tunnel No. 1 gives 340 ft., as aforesaid; the angle of inclination being 76°, or thereabouts, with the dip a little north of east, but so little that it is hardly noticeable. The foot and hanging walls are well outlined, smooth, clean, and regular as far as exposed by the pick of the miner. The former is largely porphyraceous in character, while the latter is composed chiefly of silicious lime. The vein is regular in its formation has no dead intervals to lessen the quantity and value of its ores, though it exhibits in places considerable lateral expansions, such as chimnies or bonanzas, which usually yield some of the richest ores found in the mine. The vein is about 3 ft. thick at surface, opens out to 4 ft. or 5 ft.; at the depth of the second tunnel; it widens still more at No. 1, and keeps on in the same ratio to the bottom (340 ft.), where it shows a thickness of 10½ ft. of solid ore between walls, thus necessitating the placing of two sets of timber-breast, usually placed laterally and perpendicularly 6 ft. apart. Stoping and raising are now vigorously pushed ahead from the opposite winzes, and a still greater spread is noticed as the workmen progress upward. No further explorations have been made northwards as yet, nor will there be for a few weeks longer, when it is probable that the hoisting-shaft, previously referred to, will have been completed to the desired depth; then the facilities for hoisting and working will be largely increased, while the expenses will undergo a proportionate reduction, and thus add to the marginal profits of the company. The smelting and milling ores course side by side, sometimes one and sometimes the other predominating, though the latter appears to increase as depth is gained. This is the case so far, and I have no doubt that when the waterline is reached the latter will come in altogether, the baser metals having but little affinity for moisture. As the mine stands at present there is enough of the last-named class of ore in sight to keep a 20-stamps mill constantly employed for the next eighteen or more months, and sufficient of the former to tax the utmost capacity of the furnace for the next six months at least. From this showing it is apparent that our greatest want is more reduction capacity. With this the expectations of the owners of this magnificent property would be fully realised, and camp and country benefited thereby. This, however, resolves itself into a question of time, the whole of the mill material, boilers, engine, general machinery, &c., having already arrived on the ground—so that nothing now is wanting but the contractors to give it definite form and shape, and they are momentarily looked for. Since I dispatched my last letter the mine has greatly improved, being to-day the finest piece of mining property in this section of the State, and is second only to that glorious old mine, the Richmond, which it will in future help in sustaining the reputation of Nevada.

The following assays, obtained from the two classes of ore already spoken of, taken from the bottom level, 4 ft., 8 ft., and 12 ft. above it, at intermediate points from the aforesaid winzes, will speak for themselves:—

Sample, coarse-grained galena	$331	gold and silver.
,, fine-grained galena	386	,,
,, grey carbonate	243·30	,,
Red oxide (deemed poor quality)	86·43	
Sample, poor irony ore	43·30	

Or an average of $218 per ton, assay value.

These results are far ahead of those given in No. III., though since the ore is not sorted, but taken as found, the first, second, and third class going together, the working yield may not give more than 40 or 50 per cent. of the average amount, yet either of these percentages would leave a handsome net revenue to the company. The milling or quartz ores have also advanced in assay value, as the annexed figures will show:—Samples from bottom of lower level taken from the same regions as the lead ore gave $56, $89·41, $149·83, $76·18, and $194·43, which gives an average of $113·17; and, since this class of ore can be worked up to 75 or 80 per cent., it will be seen how large a profit will be derived from them so soon as the mill is in motion. These splendid returns have been taken by myself at random from the last entries in the assayer's book, and may be relied on, because the ore is thus tested each week, in order to afford a proper guide to both the mine foreman and the smelter. These, too, are the best evidences that I can adduce in support of the enhanced value of this property in the short space of two months or less. We have seen that the vein has within the last month expanded to 10½ ft. at a depth of 340 ft. from surface outcrop, and its ores have also—a rare thing in leads that open out as this has done—grown nearly 80 per cent. richer and better than when I first examined it, last December, and I again subjected it to a thorough and lengthy inspection two days since. When such an increase takes plece in so brief a period, in not only the size of the lode, but in the value and quantity of its ore, what may we not expect when greater depth is reached, when the vein comes to be followed further to the south-east into the heart of the hill—in fact, to the extremity of the mine (1200 feet)? When steam comes to be substituted for the present slow and expensive mode of hoisting, when cages and cars take the place of buckets, windlasses, and ladders, the latter for descent and ascent; when order, method, roomy underground contracts, and the general application of art and science will do away with the present complicated and primitive system of working; and when, I say, all of these are given, may the company not consistently expect to receive still larger rewards in return for its enterprise, industry, and outlay? I should think so, and, if experience is worth anything in determining such things, I am more than satisfied that the anticipations put forth above will be fully realised in due season.

Having now very fairly demonstrated the value of the mines, I will still further exhibit their excellence by the quantity and value of the bullion produced by the furnace at various intervals, from Aug. 24, 1874, the date at which it commenced, up to Jan. 31, 1875. The run during the first few months was, of course, irregular; but, on the whole, highly satisfactory, as I think the following figures will prove. These I have been kindly permitted to transcribe from the "Smelters' Bullion Journal." Aggregates only are given:—

Month.	Days.	Ore tons.	Bullion tons.	Total assay value per ton in gold, silver, & lead.
August	8	200	25	$ 436·60
September	17	436	48¾	428·00
October	15	395	51	441·86
November	16	439½	54½	452·35
December	27	764	85½	449·16
January	18	468¾	58	443·53
Total	101	2703¼	323	$143,233·85

From the foregoing statement we see that the furnace made a run in the aggregate of 101 days, reducing 2703¼ tons of ore, which produced 323 tons bullion, valued at $143,233·85, or an average per ton of $443·44 in gold, silver, and lead, being $1418·15 per day, and a trifle under 27 tons a-day reduced. These are encouraging results when the drawbacks that always are inseparably connected with a new scheme of any kind, and more particularly with a mining and smelting venture, are considered. It must be remembered, too, that the majority of the ore reduced thus far has been taken from the upper workings, where it was not quite so good nor so easily worked as that which is now being brought forth from the levels below No. 1 tunnel. Another advantage that cannot be lightly estimated is also close at hand—the litharge resulting from cupellation. This process of separation was successfully inaugurated on the 13th instant, with a supply of 100 tons of bullion on hand on which to operate. The oxide of lead thus furnished will have a wonderful influence in facilitating smelting operations, and I look forward with the hope of being able to note an immeasurable increase in the daily products.

Tybo, Nevada, Feb. 14. —— J. D. POWER.

PACIFIC COAST MINING LAWS.

THE RICHMOND MINE, AND ITS DEFECTIVE TITLE.

SIR,—During the last 20 years a code of most important mining laws has been formed in the States and Territories west of the Rocky Mountains. When pioneers discovered mines they organised mining districts, and passed laws to govern the locating and working of claims. Though these laws were not always explicit, and might not be expressed in perfectly grammatical language, yet if custom once gave them its sanction they became binding on those locating under them, and were duly acknowledged in the United States state and territorial courts as the basis of mining title.

THE PRINCIPLES OF MINING LAW.—The various acts of Congress relating to mines attach great importance to the observance of district laws. If no valid title has been acquired to a lode under mining law the issuance of a patent cannot remedy the evil, that being only a quit claim deed without warranty for the interest held in the property by the United States. A patent issued on false representations as to a compliance with local laws, or on the assumed validity of a title which is afterwards found to be worthless, will be revoked by the Land Office authorities on the necessary proof being afforded that fraud had been employed to obtain it. These are settled principles in connection with congressional mining laws, and in the interpretation of district laws there are a few rules to be observed which are equally plain:—1. If there is no discovery of ore-bearing rock no valid location can be made.—2. If in claiming an extension the lode is not first found outside of the lines of the existing mine the new location will be entirely defective.—3. Parties who formally appropriate an outcrop as the legal extension of a known lode thereby exhaust their locating powers on the said lode. If they have taken another ledge than the one they intended to locate they will not on the ground of "intention" be allowed to set up a new claim to the actual extension discovered by other parties.—4. If a discovery at one point is used as a pretence for making several locations radiating from it in various directions the claims so made, if contested, will be found worthless on account of a fraudulent evasion of the law.—5. A location to be valid must be accompanied by specific acts, such, for instance, as erecting a monument, and placing a written notice on or near to the lode, and such acts cannot be performed at a distance.—6. The locators of a mine can have no more than they claim, or are allowed by local laws not in conflict with the United States laws.—7. It is impossible to amend a void record except by a new location covering the same ground, and if other parties have in the interval acquired legal rights thereto no change can be effected.—8. Since the passing of United States mining laws a mere possessory right without a record will not give a title to a mine, nor will it make a defective location good as against parties who have complied with existing laws.—9. When under old local laws 200 ft. was the most that could be claimed by each locator on a given lode, any attempt to claim more was futile.

HOW MINING LAWS ARE DISREGARDED.—I have been led to make the foregoing remarks in regard to mining laws with the object of showing how completely they have been disregarded by the Richmond Mining Company and its grantors. Though a patent has been issued to the Richmond lode that property has the same questionable title which made previous lawsuits possible, and the sooner the shareholders know what an insecure foundation their great expectations for the future have to depend on the better it will be for themselves. In order to show what I mean it will be necessary for me to quote some portions of the laws of Eureka mining district. We have two kinds of laws, one set passed ten years ago relating to lode claims, and another adopted in 1869, under which it became possible to make locations of deposits in squares having vertical limits. Section 3 of the law governing the location of lodes reads thus:—"Claims of mining ground shall be made by posting a written notice on the claimant's ledge defining its boundaries if visible. . . . . Each claim shall consist of 200 ft. on the ledge, but claimants may consolidate their claims by locating in a common name, so that in the aggregate no more ground is claimed than 200 ft. for each name. Claimants may hold 100 ft. on each side of their ledge for mining and building purposes." A lode located under this law can be followed to any depth on its dip under adjoining claims, but its surface ground must not exceed 100 ft. on each side of the centre of its actual course if such can be determined. The square location law, with the reasons given for its adoption, reads as follows:—Whereas explorations have made it evident that the mineral in Eureka district is found more frequently in the form of deposits than in true fissure veins or ledges, and the laws of the district do not provide for the location of such deposits; and, whereas this deficiency in the law may give rise to expensive litigation, as is the case in White Pine, a district of similar character, the miners of Eureka district have adopted the following amendments to the old laws of the district:—Sec. 1. Claims of mineral ground may be located as deposits. Sec. 2. A deposit claim shall consist of a piece of ground 100 ft. square, and such a piece of ground shall be designated as a "square." Sec. 3. The locator of a square claims all the mineral within this ground to an indefinite depth. Sec. 4. The discover of a deposit shall be entitled to two squares. Sec. 5. The claims taken up on one deposit shall not cover more ground than eight squares. Sec. 6. A prospector shall be allowed to make a deposit location, and have the same filed for record without having discovered ore on the surface, but his location shall not be finally recorded if he does not find mineral within 30 days from the time of filing said location for record. Sec. 7. The corners of deposit ground shall be designated by stone monuments or stakes."

THE LOGICAL INTERPETATION OF THE ABOVE LAWS.—The laws just quoted are explicit enough, and parties preferring the lode law to the squares law, or *vice versa*, under which to make mining locations, subject themselves to the one they select. Men, for instance, who choose to claim ground under the enactments relating to squares do in the very act of locating make an implied affirmation after this sort:—"We locate our discovery as a deposit similar to the White Pine deposits, and as the law under which lode claims are made applies only to fissure veins or ledges, and if followed by us would lead to litigation, we claim this ground in squares, having sides going down vertically to the centre of the earth, and we restrict our mine to eight squares, without claiming any lode or ledge outside of said limits." This certainly is the legitimate expression in words of the Prospectors' Location Acts. On the other hand, when a mine is located under the lode law, the claimants virtually set up a claim something like this:—"Our discovery is no mere deposit to be claimed in squares with vertical sides, but is a lode or ledge going down into the earth at a variable angle of declivity, and we reserve the right to follow the same wherever it may go beyond the side limits of our surface ground." Is it not plain from these illustrations that the law regulating the location of lode and square claims are so completely opposed to each other that the attempt to combine them both in locating a single mine is an absurdity. The one law says to the locator "You must go down vertically;" the other says "You can go down just as you are led, even if so be at times horizontally," and custom as well as common-sense adds "You certainly cannot go both ways, but you must limit yourself to your first choice, as you wrote out your location notice."

THE RICHMOND RECORD NOTICE.—The locators of the Richmond claim attempted to do that absurd thing which I have just pointed out, as will be seen by the subjoined copy from the records of the Eureka mining district:—"We, the undersigned, have this 20th day of September, 1869, located and claim seven locations of one hundred feet square. We also claim seven locations of two hundred feet each on this the Richmond ledge, this ground more particularly described as located and situated adjoining the Champion claim on the south, and running north from said Champion, and adjoining the claim known as the Tip Top Ledge, and located by Davis and Mackinnon. We claim all dips, spurs, and angles, together with all privileges granted by the mining laws of this district." Here it is evident are two location notices combined. As the one naturally destroys the other, the question is which is the notice possessing validity? The lode location cannot be legal, because it was preceded by the adoption voluntarily of the requirements of a law whereby any additional claim over eight squares, seven of which had just been appropriated, would be impossible, since the making of it would be unlawful. If this be the case where is the great Richmond lode? Is it comprised in the seven squares with vertical sides? Or is it because the directors and managers of the company regard the square location as legally good that they have invariably claimed the underlying Selkirk lode, though its outcrop is beyond the external lines of the Richmond patent? The Richmond works are now hundreds of feet east of the easterly line of the patent ground. Under what possible title is the company holding this portion of the mine at so great a distance from its seven squares? It will make matters no better to beg the question by saying that the locators were ignorant men, and any slip they might have made should be looked over, since their intentions were unmistakeable. There must be an observance of law to make the acts of the locators lawful, no matter what they may have designed to do. Nor will it avail the Richmond Company to say that the mine has cost large sums of money, and therefore its defective title ought to be called good. If Mr. J. M. English blundered in paying a large price for the mine having a location notice of such a doubtful character, that was entirely his own fault, and he surely, and those who bought from him, are the ones who ought to suffer, and not those who have been careful to comply with the laws. The defect in the Richmond title has always been plain to some persons. I pointed it out to Mr. J. J. Dunne before he transferred the property to the English buyers, warning him at the same time that if the error was not rectified then he would involve the purchasers in costly lawsuits. On account of this defect the Humboldt "jumpers" got $80,000 out of the Richmond Company without giving any title in return. Because of it, the Eureka Consolidated received $85,000 for the Look-Out square location, that being stronger to take the ore found within its lines in the Richmond works than was the Richmond square location lying to the westward thereof. Yet the Look-Out gave no title to the purchasers. It was an illegal location from the first, and the patent to it could have been readily set aside.

AN INVALID PATENT.—During the contest with the Eureka Consolidated Company the great effort of the Richmond Company's lawyers was to prove that they repudiated the square claims, and depended altogether on a lode location, but no sooner was the conflict over than they resumed all their rights under the squares. If a lode claim merely had been depended upon, the application for patent should have included only 200 feet in width, but it was for 300 feet, 100 feet on each side of the squares. Under what law such a width could be legally claimed is something of a mystery, and this unlawful claim will of itself be sufficient to nullify the Richmond patent. The fact of the patent being issued without a protest proves nothing. If the patent had been for 600 feet in width, contrary to local laws, it would have been void, whether protested or not, and it is practically void now on the same grounds. The advertisement for patent read thus:—"The Richmond Mining Company of Nevada have made application for patent for 501½ lineal feet of the Richmond lode." Unfortunately for the Nevada Company and its counterpart in London, there is no Richmond lode in existence in the mining records of Eureka district. There is a Richmond claim of certain square locations, but the lode claim combined with it is a dead letter. This matter needs no exposition by some profound lawyer. Any man of common sense can see for himself how great the defect is in the location notice.

THE ACT OF CONGRESS, approved May 10, 1872, confirms to locators of lodes all the rights they acquire by an observance of local laws, but it has no reference whatever to square locations. In the instructions of the Commissioner of the Land Office in Washington, issued to registers along with the congressional law, occur the following words: "Attached to the field notes must be the sworn statement of the claiment that he has the possessory right to the premises therein described, in virtue of a compliance by himself (and by his grantors if he claims by purchase) with the mining rules, regulations, and customs of the mining district, state, or territory in which the claim lies, and with the mining laws of Congress." And in regard to surveys for patents the following instructions have been given:—"A failure to make and record the location in accordance with the laws and regulations in force at the date of the location will defeat the claim, and if it is not made with such definiteness as to operate as notice to all persons seeking to acquire rights to mining lands, it will be void for uncertainty. It follows, therefore, that in making surveys of mining claims it becomes essentially necessary to ascertain the boundaries thereof as established by the original location for the rights of the claimant are limited and defined by such boundaries. To make a survey in accordance with other lines is tantamount to making a new location of the claim, and the rights of adjoining locators who have complied with the requirements of the law may be interfered with and defeated thereby." The Richmond Company has not complied with existing laws, and in its application for patent did not even pretend to pay any attention to the original boundaries of its claim. Such being the case the patent will not stand.

GRANTS AND PROVISOS OF THE PATENT.—The patent deed to the Richmond lode, now of record in Eureka county, contains the following grants and reservations:—"Whereas in pursuance of the Acts of Congress. . . . there have been deposited in the General Land Office of the United States the plat and field notes of survey of the claim of the Richmond Mining Company of Nevada upon the Richmond lode. . . . . Now know ye that the United States of America in consideration of the premises, and in conformity with said Acts of Congress, have given and granted, and by these presents do give and grant, 501½ linear feet of the said Richmond vein, lode, ledge, or deposit *for the length hereinbefore described* throughout its entire depth, although it may enter the land adjoining." Exception one reads as follows:—"That the grant hereby made is restricted to the land hereinbefore described as lot No. 64, with 501½ linear feet of the Richmond vein, lode, ledge, or deposit *for the length aforesaid* . . . . . but subject to the right of other parties to follow any vein or lode with its dip, angles, and variations legally held under a location made prior to May 10, 1872." The words that I put in italics show plainly that the grant only applies to a lode having its course with the length of the surface ground claimed. It has no reference whatever to a lode running at right angles to the measurement lengthwise of said surface. If it can be applied in this way then the extension of the end of the patent until they should cut the lode underground might give title to a mile thereof in place of 501½ linear feet. Of course, if parties knew before applying for a patent that their lode run east and west, but imposed on the United States by representing it in the survey as extending north and south, there would be fraud in the representation, which would vitiate the whole transaction. Now, this is just what the Richmond Company did. The Richmond lode extends nearly east and west almost at right angles to the length of its surface claim. By the device of the company in claiming surface ground one way and a lode the other the Land Office has been entrapped into conveying two distinct pieces of mining ground under one purchase and one patent. If this subtle game can be played with impunity our English cousins have shown Americans how to play it. In place of getting only 100 ft. on each side of the Richmond lode the company has secured 300 ft. on one side, as the outcrop is at the north end of the survey, and then by claiming the Tip Top to the north 600 ft. has been captured on that side, and of the lode itself perchance 5000 ft. are claimed underground.

THE SELKIRK LODE is west of the Richmond, and is a continuation of the champion lode of the Eureka Consolidated Company. I have charged the Richmond Company with piracy, in leaving its own ground and cutting through a belt of country rock to rob the Selkirk. At the annual meeting of the company, in November last, the directors, as was to be expected, denied the trespass, but it is useless in them to make this attempt, for they will be convicted of all I have laid to their charge. Mr. Probert assured the directors that the rich carbonate ore he was removing belonged unquestionably to the Richmond lode. Since I have reason to know it belongs to the Selkirk, it follows that if the latter and the deeper works of the so-called Richmond Mine can be connected on vein matter the question as to which has the legal title will become the basis of a future contest in the courts. I do not wish to involve the Richmond Company in legal troubles, but while it has a very fragile glass-house over its head, the determination to rob its neighbours, and call them thieves because they claim their own, is enough to make milder men than I am feel indignant and angry with its thoughtless directors, and its unscrupulous managing director. I have again and again asked the representatives of the company to give up their claims to the Selkirk lode, and pay me for the injury they have done, but they have got so accustomed to the belief that it either is their property already, or can be got at pleasure for a thousand dollars or two, that they refuse to do what is just and wise in the matter. In their blindness they seem determined to ultimately bring on a lawsuit which can only prove disastrous to themselves. They think the parties representing the Selkirk have not the means to make a heavy fight. Are they so infatuated as not to see that, if on their own showing the Richmond and Selkirk are the same, the defects of the title to the former will make it possible to secure all the legal and pecuniary help that is needed? The millions of dollars that have been extracted since 1873, when the Richmond Company got beyond both its own square claim and that of the Look-Out, will have to be paid for if the Selkirk has the best title to the ground. I insist, however, that the Selkirk, is entirely distinct from the Richmond, for the present at least, and I have no wish whatever to call the title to the latter in question if my opponents will only let my property alone, after paying for the ore they have stolen from it already. Each incorporator and shareholder of the Nevada incorporation will be held liable for the wrong that has been done, and the company may rest assured the day is coming when the deliberate trespass complained of will be regretted, and its instigator—the Rev. E. Probert—will receive the condemnation he merits for his unprincipled conduct.

THE COLORADO CLAIM.—Mr. Probert hopes he can claim the Selkirk by the Colorado location. As the Richmond was an extension of the Champion, and the Colorado of the Nugget, and it is well known now that the Champion and Nugget claims are on one and the same lode, it follows that the Colorado is a second extension of the Champion lode. The same seven names which were used in claiming the Richmond were afterwards employed in locating an equal extent of the Colorado, so that each locator actually claimed 400 ft. in extensions on the Champion lode, when the law limited the claim to 200 ft. each. Apart from this fatal defect in the Colorado title, the locators, further, never pretended to have discovered a lode, or even mineral-bearing material, their location having been made on a reef of country rock which the Richmond Company was green enough to purchase as a silver mine. If Mr. Probert has either managerial or directorial power sufficient to enable him to make anything of such a claim he will certainly prove himself a genius of the first water, and deserve the perpetual gratitude of such shareholders of the Richmond Company as regard any unlawful act of their representative as entirely lawful if it can only be made successful.

Eureka, Nevada, Feb. 15. —— J. D. EMERSLEY.

THE LEASE OF THE TECOMA MINES, AND THE UTAH SILVER-LEAD CONCENTRATION WORKS.

SIR,—Wonders in mines continually repeat themselves, and generally at the moment when those interested have lost all faith and hope in their success. In fact, one may say this is the history of mining from times immemorial. It cannot otherwise than excite one's astonishment to find that the Tecoma Mine after its collapse should suddenly be brought forward, and a rental of 20,000*l.* a-year offered for it by Mr. Jose Gordon. To use the American expression, "there must be a nigger in the fence," for no American would lease a mine for that amount unless he was confident that his investment would return him immense profits. This same Mr. Gordon rented the concentration works of the Utah Silver-Lead Company for six months; the mines were not leased to anyone. Mr. J. C. Bateman (the managing director out there, who still holds 2000 original shares) refused to lease the mines of the company even for 50 per cent. of the gross returns. We have recent advices that, notwithstanding the mines *were not leased* to Mr. Gordon, he has extracted and sold 1500 tons from the upper workings; and according to the *Mining and Scientific Press*, of San Francisco, of Feb. 27, Mr. Gordon continued extracting 12 tons daily. This is certainly astonishing, especially after the report of Mr. John Longmaid (the late manager), who stated that there was not one pound of ore left worth raising to surface. I have no doubt that Mr. Gordon will now work the richer ores that were discovered and reported on officially by Mr. Henry Sewell and Professor Clayton to exist in the deepest point in the mine, that is, 18 ft. below the adit, this adit being only 109 feet from surface, the assays of which produced 11 per cent. lead, $37·50 in silver, and $10·20 in gold, and which ores had been completely neglected, and never assayed, as they were supposed to contain *only* iron pyrites. The same mistake was also made in the Winnemuc Mining Company (Limited), in the same district. When the mines were about to be closed it was accidentally discovered that the iron pyrites contained even a higher percentage of silver and gold than that of the Utah mines, and this company has continued smelting ever since the discovery. During Mr. Longmaid's management of 16 months the only depth sunk by him was 18 ft. below the tunnel; the actual depth of this mine, after four years' working, and an outlay of 60,000*l.* of working capital, is only 128 ft. from surface

This is only a repetition of the many cases of mismanagement of English-American companies. Only last week we saw a well-written letter about the Pacific Company of Nevada, exposing the mismanagement of that company. Is it not a strange circumstance that not only the Pacific Company has had a native American company alongside for the last four years doing splendidly, but we have the case repeating itself alongside the Utah Silver-Lead Company,

where two native American companies have been, and are still, making handsome profits, and on the same *identical veins*. I will give the names of these and what they are actually extracting, according to the last *Mining and Scientific Press*, of Feb. 27:—The Jordan and Galena Company, 50 tons per day; the Spanish Hill Company, 40 tons per day. In close proximity we have the Kempton and Neptuue, 40 tons per day; and a whole host of other native American companies doing very well according to that same journal. Each of these American companies have their own smelting works in the valley, and unceasingly shipping large quantities of bullion to New York, Saint Luis, and other places. Surely this state of matters requires serious investigation. A HOLDER OF 250 SHARES.

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—Your correspondent, under the signature of "An ex-Shareholder," asks whether Mr. Rickard's report confirming the statements as to developments made by "professors" and others, thus assuming that such a report had been received by the board. The writer avows that he sold his shares owing to his belief in the statements of another anonymous writer in the Journal of March 6. "An ex-Shareholder" could not, therefore, have parted with his shares before that date, and consequently must have received the circular from the board, dated Feb. 27, in which it was stated Mr. Rickard arrived at Eureka on Feb. 23. Your correspondent's letter is dated March 10, and as it takes 21 days for a letter to reach London the reception of any report from Mr. Rickard was impossible, even had he penned one the day of his arrival. The "professors," against whose former reports "An ex-Shareholder" insinuates doubts, were Mr. Clarence King and Prof. Price, gentlemen recognised as two most eminent men in their profession, and whose opinions about the mine have been substantiated by the subsequent developments.

THOS. W. HALL, Secretary.

44, *Coleman-street, E.C., March* 18.

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—Your correspondent who signs himself "Member of the Stock Exchange" tries to induce your readers to believe that the recent circular of the board, in which it is stated that although the profits amounted to about 50,000*l.*, the directors only proposed to distribute 13,500*l.*, inasmuch as a "large portion of the bullion is as yet unrealised," confirms his predictions that the bullion could not be realised. It has been previously stated that it takes three months to get cash for bullion after its production, and that this state of things must exist up to the time when the company refine their own bullion, when it can be marketted in three weeks. It is absurd to say that gold, silver, and lead—the constituents of bullion—cannot be sold in America.

The statement made in your columns some months since that a much larger quantity of ore was coming out of the mine than the furnaces could deal with disposes of the charge "that the mine was being worked too fast, and the returns unwarranted by the developments." It has been mentioned in your columns that Mr. Reade, the mining captain, who went over the mine last June on the part of the Eureka Company, estimated the reserves at the horizontal level as containing two years' supply of lead. Since then a body of rich ore in advance of the old workings has been discovered, and the drifts in this ore body have been advanced 90 ft., and its width between hanging and foot walls 70 ft.—*March* 15. A SHAREHOLDER.

BUYERS OF BULLION IN AMERICA.

SIR,—In the Journal of Feb. 13 I notice a communication signed "Member of the Stock Exchange," in which the question is asked, "Are there no buyers of bullion here, and no ready market for it in America?" In reply, I desire to state that the demand here is fully equal to the supply, and the Pennsylvania Lead Company is ready and willing to make contract with the Richmond Consolidated Silver Mining Company for six months or a year, taking delivery of bullion at the rate of 20 to 30 tons per day. Satisfactory evidence of the ability of our company can and will be produced, if necessary.—*Pittsburgh, Feb.* 27. J. E. SCHWARTZ,
President of the Pennsylvania Lead Company.

ARSENIC.

SIR,—As so much has been written of late as to the deleterious effect of arsenic, as manufactured at some of the Cornish mines, in poisoning the air and water in the neighbourhood, and the necessity of a Government officer being appointed with power to employ the best practical means of preventing it, it would be very desirable to know what effect the manufacture of arsenic has upon the health of the men employed on the work, whether injurious or otherwise, and if injurious, what means are taken with a view to prevent unpleasant consequences. From the greater demand for arsenic, and the high price it now brings, the quantity manufactured is most likely to be increased; and if any enquiry were to be instituted as to the effect the manufacture has on air and water, it would be desirable to include in the investigation the effect it has on the health of the workmen employed at the mines. C. D.

March 17.

ROCK DRILLS.

SIR,—Allow me to trespass once more upon your space. Your correspondent, "Pedn-an-drea," states that what is wanted is a machine that will work in all kinds of rock and in "all kinds of places." The first can be had any day, the second never will be. The McKean drill will suit every kind of rock, but it cannot be used in all sorts of holes and corners. With "Pedn-an-drea', I do not believe that 50 fms. can be driven in a month in such a level as his or mine, although it is only fair to say that Mr. McKean has pledged himself to convert me to his views in less time than Messrs. Moody and Sankey. However, supposing that 50 fms. could be cut in one month by four men in two shifts of six hours each daily, there would be no difficulty in getting the work away. In my level 1 fm. in length will yield as follows—$6 \times 6 \times 4 = 144$ cubic feet solid, which are equal to 288 cubic feet when broken, the solid weight being 12 tons. Supposing, then, the 50 fms. driven:—

$50 \times 288 = 14{,}400$ cubic feet broken.

$\frac{14{,}400}{24 \text{ working days}} = 600$ cubic feet to be got away daily.

$\frac{600}{18 \text{ ft. the cubical capacity of horse wagons}} = 33$ horse wagons.

$\frac{33}{4} = 8$ journeys per diem for man and horse with four wagons, each journey in and out 2800 yards; total distance travelled nearly 10 miles.

To cut 1 fathom of ground at present we require not 130 holes (a marvellous number for a good miner like "Pedn-an-drea), but 30, of which 21 only have to be fired; the 30 holes averaging 72 ft. taken altogether. The forehead stands as follows:—At top, 2½ ft. of lime; centre, 18 in. of marl bed; at bottom, 2 ft. of hard grit. The marl bed being the softest we take it first to lay in by. It has no cleavage, and is as tough as wood, it cannot be got out with a pick, nor with anything else, we have, therefore, adopted the following plan—we bore three holes in the centre of this marl bed with the machine with + shaped jumpers, 3 inches diameter, and only 3 inches apart,

O
thus O, and 2 ft. deep; the next step is to bore two side holes, and
O

O O
the figure then takes this shape O O O, the machine being then
O

dismounted the men proceed to hew out the bridges between the three first holes with their picks, or, perhaps, they put in a hole in the centre of the level at bottom before taking down the column. After hewing out the bridges they fire the two side holes, the effect of which is to set the top and bottom loose about 2 ft., the bottom hole is then fired, and lastly, the top hole; sometimes, however, the top is left for a second laying in, which would enable them to put in a top hole 4 ft. deep, or 6 ft. if they could get it, as one hole at top or bottom, if free on two sides, will get as much stuff as five or six holes in the middle where it is close, as any miner will understand. Under favourable conditions these seven holes, four only of them having to be fired, should advance at 2 ft., but we find in a general way that three extra holes are required to clear all corners, &c., out, which ten holes are put in daily in two shifts of six hours each, two men to each shift, who, in addition to boring, have to clear their own stuff away from the forehead. The price per fathom for driving to the men is 3*l.*, which includes dynamite and candles (the dynamite costing about 1*l.* per fathom), and 18*s.* per fathom for bringing the work to bank and keeping the forehead clear. I do not think the forehead could be moved by hand at less than 8*l.*, but most certainly not less than 7*l.* per fathom. It will be evident to all miners that 2 ft. extra width would give greatly increased speed, and that with sundry other trifling changes, easy to introduce, my speed could be doubled, and it aggravates me beyond expression that I am debarred by the crippled terms of my contract from showing the Cornish "tortoises" how a Yorkshire "hare" can reverse the fable.—*Draycott Hall, Richmond, March* 17. GEO. WM. DENYS.

ROCK BORERS.

SIR,—With your permission, I will lay before the readers of the Journal a few facts and figures of practical experience derived at the Frederichseigen Lead and Zinc Mines, in Prussia.

ROCKS.—Coblenzer slates interfoliated with quartzites.

MACHINERY.—A 20-inch cylinder steam-engine driving an 18-inch cylinder compressor, stroke 4 feet, speed from 2 to 20 strokes per minute. A receiver 40 feet high and 5 feet diameter, length of pipes 250 fathoms. Borers made of ⅞ inch diameter octagonal steel, points Z-shaped. Four sets of tools employed, each set being about ⅛ inch less in width at the point than the preceding one. Tools sharpened by means of a hammer and a file, and after each sharpening straightened and rendered true in a machine constructed for that purpose. Pressure for working borers 60 lbs. per inch; speed of borers, 300 blows per minute; length of stroke, 2½ inches; size of forebreast, 6 ft. 6 in. by 6 ft. 6 in. Number of boring machines employed at one and the same time, 4; borers mounted on a carriage; men employed when boring, 4—one on each side of the carriage to advance two borers, one to two borers in the forebreast to superintend their working and withdrawal of the borers. Number of holes made in the forebreast, 24; depth of holes, 5 to 6 ft.; holes electrically fired; holes charged with dynamite cartridge about 10 in. long. Boring holes with four machines 10 hours, blasting and removing stuff 14 hours: total, 24 hours. Men employed in blasting and tramming stuff, 2; total in forebreast 6 men. Rate of driving in slate, 12 to 13 fms. monthly. In hard jointy quartzite, 4 to 5 fms. monthly.

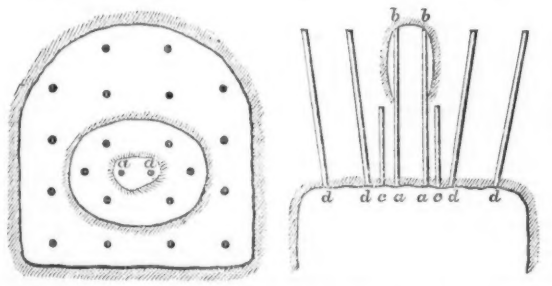
Results for January month in hard jointy quartzite, very difficult for the tools to penetrate—tools continually breaking and jamming in the holes, rendering progress of the work exceedingly difficult:—

Length of ground driven, 7 metres.
Number of days worked, 25.
Ground driven per day, 0·28 metres.
Total amount of holes bored, 147.
Number of holes bored per metre, 21.
Aggregate depth of holes bored, 202 7-10 metres.
Aggregate depth of holes bored per metre driven, 28 9-10.
Average depth of each hole, 54 in.
Wage made by miners after paying for dynamite, but not for tramming the stuff, 74*s.* per man per month.
Number of shifts worked of 10 hours, 117½.
Number of shifts removing stuff, 84½.
Number of borers used in month, 163.
Number of hours employed in blasting and removing the stuff, 84½.
Number of hours employed in lengthening air-pipes and extending rails, 17.
Dynamite consumed, 110 lbs.; dynamite consumed per metre of ground, 15 6-10 lbs.
Dynamite consumed per hole, 12 ozs.
Number of hours worked, compressing air for the borers, 163.
Number of hours worked for compressing air to ventilate the forebreast, 81.

TOTAL COST.				
Six miners	£19	8	0	
Tramming stuff	1	1	0	
Oil and sundries	0	6	3	
Dynamite	6	12	0	
Fuse	1	0	0	
Coal	16	2	0	
Smiths' cost	3	11	9	= £48 1 0

Wages per miner per shift of 10 hours, 3*s.*
Cost of driving 1 metre of hard jointy quartzite, 6*l.* 8*s.* 6*d.* per metre.
Length of level driven per day in the quartzite by means of the four machines, 11 2-10 in.
Length of level driven per day in the same rock by means of hand labour alone, 1 6-10 in.

Total cost of machine boring	Per metre £	6	8	6
Cost by hand		10	10	0



When the boring of the holes, angled as per sketch, is completed the carriage is withdrawn, and the blasting is proceeded with. The first shots are the holes A, A, and the rock is broken in such a manner as to leave a cavity. The shorter holes, C, C, are then charged to blow down the portion of the front of the cavity which may have remained untouched, but it often happens that these small holes prove unnecessary, and that the same effect is produced to their full depth by the first shots. The process is continued by means of the holes D, D, situated on a horizontal line, passing through the central hole in such a manner as to form an excavation as if hewn across the face of the rock to be cut away. Afterwards the upper holes are fired, and the operation is finished by firing those near the floor. The blasting is performed in volleys of four or five charges by means of an electrical apparatus, the attle or rubbish being loaded up and removed from time to time. To loosen the rock, especially in hard ground, it is necessary that several holes should be fired simultaneously, electrical blasting being employed with excellent effect. In addition to the four borers now at work, it is expected that the Darlington borers will shortly be introduced into the same mine.

One of your correspondents, "Pedn-an-drea," is exceedingly encouraging in his remark that *he* does not think much of machine borers or drills for shaft sinking. With faint praise he would damn us and all attempts to solve the problem. I would ask him what is the change of conditions relatively that make machine boring in shaft sinking proportionately more difficult or impossible than it is by hand labour? Why will not a drill work downwards and drill as effectively as when working in an end in a horizontal position? The former seems to me, as I should have thought it would appear to any reasonable mind, the most favourable position as likely to give the greatest effect. The greatest benefactor of his race next to the one who can and does help you along is the one who tells you how and why you cannot accomplish what you are aiming at, and not by insinuations discourage those on whom you are relying for assistance. I regret that I cannot give him any satisfactory statement as to the result at Wheal Agar. I find it exceedingly difficult to get men of intelligence who will know the why when results are in suspension. I do not know the pressure or waste of power in our pipe before it arrives at the bottom of the shaft through leakages and other causes. Machine drills have been working five years in Germany. The result at one mine is here before your readers. I hope in a few days to be furnished with particulars of the result of shaft sinking, where more than 50 fms. have been sunk to the advantage of the employer, but who, I must say, had taken the matter of working the machine into his own hands, and worked as a common miner for a month, until one or more of the men could work it as well as he.

Of their success underground I cannot conceive a reasonable doubt, with proper force, and if any of your correspondents will enlighten me I should feel grateful. I doubt not that 99 out of every 100 Cornish and Devon miners would condemn the mode of boring and blasting as illustrated above, and which is universally followed in Belgium and Germany, where machine drills work. Men's minds, I fear, are warped by continuance in one groove. A summer's excursion to Germany would open the eyes of many could they be induced to spend a month at one of the largest mines.

Sinking shafts by machine-drills is a fact under whatever difficulties through inexperience and a want of mechanical knowledge of cause and effect new beginners may be temporarily discouraged. The result if judiciously pursued cannot, to my mind, be a question of doubt. H. WADDINGTON.

47, *Threadneedle-street, City, March* 15.

ROCK BORERS.

SIR,—"Pedn-an-drea," probably a mine agent, writes from his own individual stand-point, a point limiting his practical observations to about a dozen mines, and a score or so of mine agents, men excellent in what they know, but attaching too much importance to the conventionalities of the past, rather running to the rear than in the van of progress. A passing comment on "Pedn-an-drea's" epistle to the ignorant may perchance give some little information to your readers. If "Pedn-an-drea" has watched the progress of rock-boring machines he knows little or nothing practically about them. If this assertion is denied, let him inform your readers on the essential differences in the construction and working of the Burleigh, McKean, and Ingersole drills in America, of the Low, Warrington, Brydon and Davidson, Warsop, and Darlington drills in England, of Cavé drill in France, of Francois and Dubois drill in Belgium, of Sachs, Schwartzkopff and Osterkamp drills in Prussia, of Bergström's drill in Sweden, and of Sommellier's drill employed in the Mont Cenis Tunnel. Let him also for the benefit of your numerous practical readers show why a percussive borer is more likely to be the miners' machine than the diamond drill devised by Leschot, and employed by Beaumont, and the abrasion drills patented by Tregay. A drill to work in all sorts of places is as reasonable a demand as if "Pedn-an-drea" insisted that a locomotive should travel on all sorts of roads. Borers are used successfully in sinking shafts and driving levels, in spite of "Pedn-an-drea's" want of faith in the former operation. Even "Pedn-an-drea" ought to have been cognizant of what Mr. Brain effected in shaft sinking at Cinderford three years ago. Boring machines cannot surely and successfully attack all kinds of vughy and jointy ground. "Pedn-an-drea," as a teacher of others, must know that in hand-boring such rocks the hole is sometimes lost, or has to be prematurely blasted. If such a circumstance happens to an intelligent miner tool in hand, what can be expected from a non-intelligent machine set to do a particular kind of work in a special and arbitrary kind of way? "Pedn-an-drea" cannot see any analogy between driving a heading 8 by 8 at St. Gothard and driving a level in Cornwall, yet he condescends to ask for information. Let him use like appliances driven by sufficient power, the like boring and blasting system, the like method of removing the stuff, and, above all, the like men to do the work, and "Pedn-an-drea" will obtain a like result. "Pedn-an-drea's" knowledge of cutting ground is evidently limited to that of hand labour. He does not seem to have discovered that a mechanical system of boring ought to embrace a mechanical system of working, and conditions for attaining speed widely different to those connected with the breaking and removal of ground by means of hand labour. What would "Pedn-an-drea" say to attaching a donkey to an express train? He would have all the appliances for an express speed, but would only secure a donkey's pace. The fact of boring at one time only two holes to advantage before blasting, and oftimes only one, shows that "Pedn-an-drea" has not the slightest practical knowledge of the system of boring and blasting pursued in connection with successful boring machinery. In spite of "Pedn-an-drea's" practice, it may frequently be an economical operation to bore many holes, and to expend a considerable weight of explosive in order to force the progress of a level or shaft. Ventilation can be secured cheaply by means of a duck machine, fan, or other suitable apparatus, but when air-compressing machinery is erected for the purpose of driving borers it will be as cheap to ventilate the ground by means of such machinery as to employ distinct apparatus for that purpose. "Pedn-an-drea's" practical experience of firing by means of electricity is probably but very little. He will find with a well-devised system of working ground, even with abrasive borers, that electrical firing will save time, and afford other still most important and desirable advantages. Even although "Pedn-an-drea" is known as a practical miner, yet the practical mining engineer has advantageously employed boring machines in comparatively cheap ground, and boring machines are at this moment successfully used in sinking shafts on the Continent. It is almost unnecessary to remark that Cornishmen have rendered excellent service to mining, but they should remember that the art of mining is now practised by every civilised community, each producing its able men and independent thinkers, men who are too honest and too careful of their reputation to dream of making Cornishmen, or any other set of miners, "the dupes of their phantoms." Certainly "Pedn-an-drea" ought to have no prejudice against boring machines, but it would not have been amiss had he written less dogmatically, and had commended the efforts of inventors to establish the success of their various machines, whether such machines involve percussive or abrasive action. —— DOGBERRY.

ROCK DRILLS.

SIR,—As Capt. Wm. Wasley, of Fron Fownog, was one of the earliest to adopt rock drills for mining purposes in this country, his testimonials in their favour being amongst the first received in favour of the Rurleigh drill, when the Burleigh drill was represented by Mr. Warrington, will he kindly state how long he had the Burleigh on the mine, and how long it was idle for repairs; also how many hours in the aggregate it worked, with the average cost per month of working; and how much ground was removed, with the price and time it would have cost to remove it by hand labour? As Capt. Wasley was using the Burleigh for both sinking and driving the record of his experience will be invaluable to the readers of the Journal. As he now states that he has had the power-jumper or Kainotomon in use for 18 months—that is 14,000 hours—I shall be glad if he will give similar particulars with regard to that machine, as I should like to make a comparison of the relative merits of the Burleigh and the Kainotomon, and also to show whether or not as favourable results are obtained in this country as in America, where Burleigh drill is, perhaps, more extensively used than any other both for mining and other purposes. Simplicity is sometimes obtained at the expence of efficiency, and I must say that in all my experience, and I have seen every drill in use that has yet been introduced into this country, none have run more smoothly or done better work than the Burleigh.

March 15. A BELIEVER IN THE BURLEIGH.

MACHINERY AT THE CARIGGAN MINE.

SIR,—In last week's Journal I notice that the Report from Cornwall refers to the pneumatic stamps at work as our Cariggan Mine. It may interest some of your readers to know that, in addition to being the first to see the great advantages of Mr. Husband's stamps over the old system, the companies with which I am connected were amongst the first to adapt the Blake stone-breaker to the requirements of tin mining. We had one working at our Tretoil Mine before the one was erected at Tincroft, about which so much has been said, and that now working at Cariggan is probably the largest in the county. I am glad that the value of these machines is at last

being recognised, and I live in hopes that they will before long be considered as much a necessity in a tin mine as the stamps.

Bodmin, March 18. ——— J. FLETCHER PAGEN.

THE SOUTH WALES COLLIERS.

SIR,—It is said that the average duration of colliery life is a good deal below the half of "threescore years and ten." Also, that poor Spanish girls are wont to say, "It is hard to marry a miner, for he must leave us so soon." Also, that amongst Lancashire colliers there is a sadly-suggestive adage, to the effect that "A lass lasts three husbands."

Now, assuming this to be true in the main, nothing but a cold and dead soul can refuse (for the moment, at all events) to take sides with the collier, both as regards the nature of his occupation and his rate of remuneration. For the occasion, let us divide our people into three classes—namely, those who have not been, those who have been (once or twice), and those whose dirty, dismal, and dangerous calling obliges them to go daily down a coal pit. The first, and by far the largest, class have little or no idea of a coal pit beyond their own coal cellars. These are aware that coals burn away very fast, and cost a lot of money. They seldom dream of going to a coal merchant's funeral; and their thoughts are never induced to travel underground into a suffocating hole to see how the colliers manage to "win" and send to daylight black masses of the buried sunshine. They are hardly blamable for not extending their vision thus far. They have no sympathy for coal merchants, and they fancy themselves altogether independent of the army of colliers. They have to be told it is not so. They require reminding that this country is not able to spare chips enough to kindle our coal fires, to say nothing at all of affording us a sufficiency of wood-fuel; and that, therefore, the stoppage of our coal supplies would be the inevitable death of us all. The second class are very few in number. Coalowners dislike interlopers, as a rule; and amateur colliers are not over numerous when there is a chance of going down a pit. Some of this class, however, can sympathise with colliers when they are in any trouble. Whilst a cutting easterly wind is whistling cold discomfort outside, I am writing close by a cheerful fire of coal that has been fetched from the end of a mile or more of horizontal galleries, up a shaft of nearly half a mile, to the day, and brought 30 miles by rail to the house where I am staying, at a cost of 25s. for a scanty ton. I cannot help feeling painfully alive to the risks those ran who "won" it for my warmth and comfort. Big drops of sweat may have fallen on it, and possibly some drops of blood; at any rate, a portion of somebody's life has oozed out and away to do me service. Let him who thinks so dare to call this maudlin sentimentality.

The third-class—the colliers—do not pretend that they are angels. They are up to deviltry, like other men, sometimes, and many of them, doubtless, would imitate their betters above ground by adulteration if they had the chance. But many of them are most intelligent men, very many are religious men, if the number of "Bethesdas" built by and for themselves may be taken into account. Very many of them are out-and-out "teetotallers;" all of them appear to patronise funerals and foot races. A sprinkling or them are addicted to drinking and fighting, but the mass of them, as we now see them, have the moral courage to be staid and orderly under the most painful circumstances. Now, let us write what in effect this class of our operatives are saying—"We sent to bank last year 127,000,000 tons of coal. Of this enormous quantity 35,000,000 tons were used about iron; 28,000,000 in keeping in motion 40,000,000 spindles and 500,000 looms to clothe the nation, and a good deal of the world besides; 3,500,000 for carrying the goods across the seas; 3,500,000 for working railroads at home; 750,000 for forcing water from long distances into houses; 6,500,000 to make gas-light for factories, highways, and the nation's dwellings; 20,000,000 for sundry absolutely necessary uses in those dwellings; and the spare 12,000,000 tons beyond all this were sold at a large price to foreign people for like purposes."

The colliers say, "We do all this; in doing it we shorten our lives in the hazardous nature of our labour, and we want what is fair for continuing to do it." The masters say, "You have been over-paid for doing it, and we will now only pay you so-and-so." A section of the men say, "We will not take it; we will starve first." The masters say, "Starve, then," and simultaneously lock-out thousands upon thousands of others who had agreed to, and were actually working at, their masters' reduced terms.

This looks like using the sharper edge of the sword of capital. The present position, therefore, is that the pits are closed, and thousands of colliers are starving by inches. Masters and colliers alike allow of no mediation—they must be left, therefore, to fight it out to the bitter end. The public are told by the masters that on the terms proposed their men can earn from 4s. to 5s. per day,

If this be literally true the case of the men, though not one of martyrdom, claims the exercise of public opinion upon it, and it has suddenly struck me was that the public are short of particular facts to enable them to form a fair and just opinion, and that the *Mining Journal* should be made the medium of getting at them. They are simply these. We want to know—1. The average price per ton paid to the collier (proper).—2. The average quantity of coal per day of eight hours the collier cuts.—3. The average thickness of the seams from which the coal is "won." Your correspondents in the various coal centres can easily give this data to begin upon, and I feel sure they will readily respond. The information of itself brought to a focus in this way would be very valuable in more senses than one. It may be that colliers are being overpaid, but their calm, orderly, and resolute resistance to what they are brooding over as unfairness seems to point to the contrary fact.

In the Journal the other day it was announced that the largest coal company in Lancashire made a good profit in 1874, and declared a dividend of 37½ per cent, upon its capital of 1,250,000*l.* sterling, not to mention a large sum undivided and carried forward. Probably the colliers at these pits (the deepest in the country) were and are "fairly paid." One is inclined to think that the shareholders partaking of all this bread-and-butter can scarcely, under the circumstances, wish to crumble off any of their hard workers' bread. But the unexpected is always happening now-a-days, and in a body corporate, albeit the members are many and healthy, even if there happens to be a good head on its shoulders, the "hands" and the head are generally so far apart that very little of heart warmth is generated. This is, perhaps, the canker at the heart of our coal and iron industries at the present moment. T. A. R.

March 17.

STRIKES AND LOCK-OUTS—CAPITAL AND LABOUR.

SIR,—Is our trade and commerce at this moment in a healthy and thriving condition? Authorities on the subject are greatly divided, and it must be admitted that there are grave changes and abnormal divergencies occurring from day to day which justify differences of opinion. Unquestionably the true wealth of a nation consists in the abundance of its healthy, industrious, and virtuous inhabitants, able and willing to labour and do their share of the nation's work—all specious political and sceptical economy to the contrary.

The South Wales lock-out alone, although to the distempered fancy of Mr. Alexander Macdonald and men of his stamp it appears only an organised opposition to crush trades unionism, speaks volumes as to the state of our leading industry. It is evident in this once great industrial pursuit trade has collapsed simply because it has become unprofitable to the masters. Again, if the master spinners of Blackburn carry out their threat a similar blow will be struck at the cotton industry of North-East Lancashire. Durham and Yorkshire are in a chronic division between capital and labour, involving disputes only varied from the others by arbitration. Thus the contentions between labour and capital are evidently subjected to a fierce dry-rot, under which the strength of both are consuming away, and the results must end in grief to many, and utter discomfiture to the whole, and especially to the workmen.

The suspension announced last Saturday of one of our leading City houses, which exceed in magnitude any failure that has occurred in the commercial world since that of Overend, Gurney, and Co. in 1866, clearly shows that there is something wrong at the core of our financial dealings—in fact, it is evident that the facilities afforded by our gigantic banking and discount companies foster over trading, and that the occurrence of such a catastrophe as that to which we alluded and that of Messrs. Gledstane two years and a-half ago, are solely attributable to speculative transactions, and reflect not only dishonour on the suspended firms, but likewise show that the fierce competition existing among financial companies for increased business is most reprehensible in principle, while probably it is the primary cause that inflicts on the general public so many losses and discomfitures. These become intensified when we perceive that the fly-wheel of commerce and trading lack that intelligent supervision which ought to exist in joint-stock companies, as unquestionably it does in establishments of honourable capitalists, and observed in all their dealings.

Trade has been contracted for the last two years, and the question arises, though it has become reduced in bulk is it now healthy and remunerative? For our own part we think the reverse is the case, and especially so in metals and minerals, which next to agriculture yields the greatest product of all our home industries, while the ramifications of their varied appliances affect primarilly the working masses in almost every branch of manufacture, trade, and commerce, on land and at sea. No steam ship could plough the ocean, or sailing vessel skim the waters, without the use of coal; no engine could traverse our iron roads, or locomotion exist for passengers, goods, and products without the aid of fuel; and, *de facto*, unless we get cheap and an abundance of coal our trade and commerce must necessarily become still more contracted and languish, for our manufacturers and merchants cannot otherwise profitably compete with foreigners in the chief marts of the world.

The question at issue is whether we are approaching and near the era of improvement which men of business have been hoping to achieve, or, on the contrary, are we still likely to experience further depression. Without expressing a decided opinion on the subject of strikes and lock-outs—*i.e.*, the justice and merits of either one or the other—we unquestionably believe that progress and expansion depend on the cessation of war between labour and capital. Although the coal and iron trades are in a sad state of disquietude, it is satisfactory to be able to record considerable activity in lead mining, the continued prosperity of the Van in Montgomeryshire, and of several mines in North Wales. There is, in addition, a new field of prosperous mining in Yorkshire. The Cock Hill and Sunside, Grassington, Merryfield, and Stoneygroos are prizes of more than ordinary growth and character; and two or three others about to be introduced into the London market will establish a reputation for the district second to no other throughout the length and breadth of the land. It is thus satisfactory to announce that the long depression in mining is likely soon to be enlivened by the introduction of several first-class and brilliant prizes.

43, *Bishopsgate-street, March* 17. R. TREDINNICK,
Consulting Mining Engineer.

NORTHAMPTONSHIRE IRON ORES.

SIR,—In reference to the article on the Northamptonshire Iron Trade, in last week's Journal, I would be glad if the following extract could be explained:—"The quality of the iron made is good, as the ore is highly silicious, so that it is well adapted for rolling and most other purposes." Now, I should like to be informed how a high percentage of silica in an ore is beneficial to the working of iron, and whether an ore of this character can be worked to better advantage than one not so highly charged with this constituent.

Edgbaston, Birmingham, March 17. F. D. TAYLOR, M.E.

MINING, THEORETICAL AND PRACTICAL.

SIR,—The protracted correspondence which has recently taken place in the *Mining Journal* has brought to our view a variety of opinions respecting the Cornish mine agent's ability to discharge his duties, but the criticisms indulged in reflect more injuriously—so far as I am able to judge—on the writers themselves than on those they intended to damage. If a gratuitous display of ignorance is an evidence of the want of wisdom some of those writers would not do amiss by taking the matter to heart. It may be thought quaint by a writer to describe practical men as "standing on one leg," but it occurs to me that the exhibition we have recently been called to witness has shown that most of those who entertain that view have been trying to stand with no "leg" at all. It is rather remarkable that the Cornish captain, who is facetiously described as standing only on one leg, can still persistently defy any of those said to have two to push him over, and if one strong leg is better than two weak ones it would be far wiser, in my judgment, to improve the weak rather than endeavour to wound the strong. But are Cornish agents the one-legged creatures they are represented to be? That they have a strong leg—nay, an invincible one—in their superior practical skill I shall not attempt to deny, but they have another, and well know when and how to use it. If their great practical skill so far transcends the vague theories of mere pretenders, is that any proof that they have no theories of their own. I am surprised at anyone calling himself a practical man nursing the fallacy within his own breast that Cornish agents have no theory. Why, Sir, it is next to be impossible to proceed with practical mining without a theory, and theory preceds every subsequent step. To mine without a theory would in effect be to mine without an object.

It is barely possible that some of those clever writers who have lately been entertaining us may have seen such mining and practised it, but I never have. The extent of my observation and experience leads me to conclude that Cornish agents never set about their practical procedure without a theory. If they propose the sinking of a shaft for the development of a mine is not that operation preceded by a theory regarding the object it is intended to explore? And is not there an intelligent reference to and a provision for contingencies which may arise during the indefinite prosecution of that leading exploratory and communicating centre? Is there no theory which determines the size, form, and general arrangements of such shaft, and which refers distinctly to the purposes both immediate and remote which it may be required to fulfil? And is there not a clear and intelligible mental outline of the objects, together with their phenomena, peculiar and general, which it is proposed to explore and develope? And are there not anticipations drawn from premises as self-evident as major propositions in logic with reference to the results? And are we still to be told by ignorant and envious pretenders that in our practice we recognise no theory, when in reality there are none who more intimately associate theory with practice than the mine agents of the two western counties of England. But they take care that their theories shall be fundamentally based. There is a plan of methods inaugurated by their initial operations which are proceeded with as much with reference to the future as the present, and are never lost sight of, though never seen at the points if it is proposed to arrest them. By what other process than theory is the distinct vision of invisible objects formed and retained by the mind, and with sufficient clearness to actuate and sustain a protracted and expensive exploratory experiment, and the minds of all interested animated by an unflagging hope, if it is not theory? but, then, it is the theory of induction.

Again, is there no theory entertained by Cornish agents concerning the relation between the productiveness or otherwise of lodes, according to the nature and condition of the containing rocks, and of the changes which are produced in lodes at the respective points of their intersection with and divergence from each other, and also by their intersection by cross-courses, slides, and other dykes? Upon what other basis than theory are judgments formed and expressed? If the practical miner had no theory in regard to these matters his judgment on mining would be worth no more than that of a clod-hopper or hod-carrier, because if he had no theory he could have no understanding; and, consequently, no ground for the formation and expression of judgment could exist. If reasoning from analogy is not theorising I will thank either of the recent detractors of Cornish mine agents in the *Mining Journal* to tell us what it is. What is theory if it is not a logical deduction? But theories sometimes, and not unfrequently, proceed upon false premises; and though the conclusions in such cases are strictly logical they are nevertheless false, and if adopted lead to error. The miner reasons from analogy, and in proportion to the scope and accuracy of his perception will be the determination of his judgment. His deductions concerning facts which are not known are drawn from facts which are known, and the conclusions are treated with more or less respect, according to the nature of similar occurrences in his past experience. It is a speculative kind of inductive philosophy, necessarily so because the premises are complex, and cannot be superated but by destroying their identity.

If there is a preconcerted method or plan of working, upon no principle could that have been constructed except by theory, and as the Cornish agent is never without his method, theory must be admitted to precede his practice, and those who think otherwise nurse a fallacy which they are inexorable in entertaining. The majority of Cornish agents are men of large, and some of them of varied, practical experience, whose acquired knowledge enables them under many circumstances to dispense with those theoretic preambles which others not so conversant with the business are compelled to have recourse to. It looks as though the Cornishman must be censured for being able to walk to his work without those aids that many others are obliged to have recourse to, and because of his impatience to be doing when he has special duties to perform, instead of frittering away time in useless talk, which seems to him like trying "how not to do it." I know by observation and experience that in no part of the world can they be excelled, if even equalled by, any others, of whatever nationality. It is easy to shut one's eyes to the merits of others, and to magnify our own, but what is the use of doing so? The world is eminently practical, and Cornish mine agents possess that quality in a no less eminent degree, and so long as they are found capable of doing what others are unable to do book-made miners can only contend against them in vain.—*Llanrwst, March* 16. ——— ROBT. KNAPP.

SUCCESSFUL AND UNSUCCESSFUL MINING.

SIR,—What must I understand by "A Cornishman's" last monthly periodical letter? From the tenor of his remarks, I gather that it must be self-apparently a deeply-cutting one. As for the Cornish being "energetic, solid, and plucky," I have an idea of their ability to work when directed by men of fertile brains, certainly; but I must continue to assert they have not the grand directing power of their neighbours (Germans and Americans), for which reason solidity and pluckiness are fully required. But "A Cornishman," strange to say, is deficient of those qualities, not having pluck enough to give his name! "Difficult passages, indeed! Consanguinity (dictionary)—relationship by blood. I fail to discover the other "difficult passages." Whence the happy quotation, pray? It must be in solemn truth admitted that one knowing so well the impropriety of the Latinisms and the bombastic display of classical learning ought to know his own language extensively enough to understand such plain English. I see nothing further worthy of reply in "A Cornishman's" letter.

"Ex Nihilo Nihil Fit," I cannot do much better than refer you to the letter of "Un Englese" in last week's Journal, from which you may gather several valuable hints; instead of dealing in personalties, debating on grammar, diving into the devious paths of metaphysics, here is something for serious contemplation—how best to promote successful mining in every possible manner. Is a knowledge of minerals, their prices, uses, &c., detractive from the necessary qualifications of an agent? Does an acquaintance with the observations of contemporaries incapacitate one from being an efficient mine manager? The numerous correspondents of late in this paper have fully negatived such questions. In this age of gigantic strides, when such colossals chemes as the Channel Tunnel, 81-ton guns, &c., have been undertaken, any enterprise which has for its object the benefit of mankind generally should be treated with respect and consideration, even if it comes in the form of "perpetual motion" or making "diamonds from charcoal." "Unqualified agents" have been treated with contempt by "Ex Nihilo Nihil Fit" and "A Cornishman"—the former because, perhaps, the "cap fits him;" the latter because (as he says in a previous letter of his) he is no mine agent, neither connected or in any way interested in Cornish mining. Maybe he is a tailor or a shoemaker; if so, one word of advice—"Mind your own business!" Better and palmier days are in store for us when the race of "one-legged" men shall have resigned. Technical education is being taught in almost every mining district of Cornwall. Soon we hope to see our mine agents standing on the two legs of "theory and practice," when we shall not have to complain of "unqualified agents."

Camborne Beacon, March 17. T. HY. ALLEN.

TECHNICAL EDUCATION IN RELATION TO MINING.

SIR,—A great deal has been said from time to time in the columns of the Journal on this subject. But of what use is all this talk unless something is really done to improve the education of the practical miner? Whilst I agree with Mr. T. H. Allen in some things stated in his letter of March 3, yet I could not endorse all he says. There is no doubt that the greater number of Cornish mine agents could do with a better education than they can now boast of, but I cannot think that the unsuccessful mining in Cornwall of late is due entirely to unqualified managers, as suggested by him. Were the mine agents more intelligent in the "palmy days of yore," as Mr. Skewis calls them, than they are now? Or where they more attentive to their work than now? Certainly not. If we can credit what Mr. Skewis says in former letters, mine agents are watched too closely by "a host of foes" to allow them to be negligent even if they would. But I cannot help thinking that, as a whole, it would be their greatest earthly glory to obtain a brilliant success in every undertaking. He who does not make this his distinctive purpose is unworthy of the trust consigned him, and should be immediately removed. That *all* mine agents hold their position on the grounds of merit I cannot for a moment believe. I will take a case out of many as an example. At Huel A—— an agency is vacant. The mine is large, complicated, and employing a great number of hands. The committee or directors think it proper in the interest of the mine to elect one from among their own staff of labourers, who, of course, would know more of the nature of the mine than a stanger could for some time. How is it that person is elected? Is it by a competitive examination of native talent and genius? Nothing of the sort. It happens that Ned Noodle has some connection with someone who can influence the appointing committee, and who represents him as "sound practical man." But in what is he "sound" and "practical?" He is "sound" in muscle, and as "practical" in the use of them as the horse which works daily at the whimsy; but he has only just learnt the alphabet, and is unable to enter into the stem-book intelligibly any items of work done. Other men of equal practical experience might have been found who had studied the theory of mining with its concomitant sciences, but they were not sought for, and had they made application they would not have been listened to. Under circumstances of this kind I would suggest that a competitive examination should be held, in which all the candidates should be examined closely in all the principal points relative to mining. This would not only induce young men to study, and thus improve their talent, but mining would have in its leading men the best talent and most refined genius. I do not state that the foregoing example is to be taken as the rule, but I do say that men are not raised to position according to their relative merits as often as they should be, and, therefore, young men have not that stimulus they would have had there been more encouragement offered them.

Some might very naturally ask, What should be the nature of the encouragement offered to young men to study? Well, I think that if no one could be raised to the position of mine agent after the present year without holding a certificate of competency, granted him in the same way that the colliery agents are, a great number would be spending their time in the study of the sciences which apply to the daily business of this life, instead of wasting it as many do to no purpose. No man can make any great advancement in anything whatever unless he has a distinct object before him, and a set purpose to obtain that object. If such a law were passed with regard to managers of metalliferous mines an object would be forced on individuals who would have themselves to call forth a will and a purpose if they hope ever to distinguish themselves in mining circles, or raise to social eminence. It is my firm conviction that such an event would give more effectiveness to the operations of the Miners' Association of Cornwall and Devon than any one thing beside; for

whilst men think that they can get into office only by the influence of their friends, without any particular regard to qualification, few indeed will make sufficient sacrifice to acquire even a very limited knowledge of true science or sound philosophy. A man once said to the writer of these lines, "What a big fool you are." "Why?" was the answer. "Here are you," he said, "killing yourself by bothering you brain about chemistry, mineralogy, geology, mathematics, &c., which are of no more practical use to you than they are to me. I prefer ease and self-indulgence, a knowledge of those things do not lighten the task of my earning a living." Such is the prejudice and self-sufficiency of the generality of working miners that nothing but a severe pressure will give them a bias for the study of abstract principles and theories. This does not say much in favour of their proclivities I must admit, for he who does not aspire to a higher knowledge than that which will enable him to work and eat puts himself on a level with the brute.

For the foregoing reasons the Miners' Association of Cornwall and Devon has benefited comparatively few working miners, for whose benefit it was instituted, and still exists. The principal students were years ago, and from what I can learn still are, sons of tradesmen, farmers, &c. My impression is this—that if there were an affiliation between the institution in question and the Royal School of Mines, Jermyn-street, much more good would be done towards furnishing the practical miner with a technical education. Situated as those schools are I do not see how they benefit the practical miner, so few being in a position to attend the courses of lectures given there. Since it may not be convenient to remove the schools into a mining district, giving the working miner an opportunity of attending the lectures, lectures on the same subjects could be given in the classes of the Miners' Association, and at the end of those courses let there be an examination at Truro, giving to successful students diplomas of competency, protected in the same way as University diplomas are; this would induce young men to sacrifice ease and self-indulgence on the altar of science, and in the course of a few years our mining engineers would be second to the mining engineers of no country.

I hope that this important subject will be more thoroughly ventilated in the Journal by more able correspondents.

Carnarvon, March 10. ——— JNO. ROBERTS.

GOLD IN WALES—THE GOLD COMPANY (LIMITED).

SIR,—Since taking the lease of the above property and locating myself here I am receiving letters daily asking for information about the concern, and as I am not a good hand at correspondence, and have little time to spare, I should feel obliged by your inserting the following lines in the Journal for general information.

The mill is perfect except as regards capacity, its crushing power being only 20 stamps, whereas there is room for 100. Coal is, however, difficult to get, owing to the steep ascent to the mill. There is sufficient water-power, but not too much. I have erected proper rockers, amalgamators, &c., and everything is now working from 7 A.M. to 7 P.M. daily. When I have sufficient coal on hand and more labour we shall run night and day.

A fair average assay lately taken of the contents of the tanks, where the blankets are washed after the crushing process, gave some 50 ozs. of gold, whilst an assay (taken on the 11th inst.) of the same *after* running over the quicksilver gave about 1¾ oz. This shows that the process I use enables the quicksilver to absorb the difference. I hope to "clean-up" about the first week in April, and am much surprised if the result does not immediately attract attention to gold mining in this district.

What puzzles me is how you English can go to California and other distant countries for mining when you have at home properties like this, the Clogau, and, doubtless, many others, which equal the best looking lodes I have ever seen in 24 years' experience on the Pacific Slope. Want of knowledge seems to have delayed the success of this venture, but I think all will go right now, and were the mine in my own country there would be 300 men at work night and day.—*Dolgelly, March* 13. CORNELIUS REILLY.

WHIDDON UNITED MINE, ASHBURTON, DEVON.

SIR,—This mine is situated one mile from the branch line of the Ashburton and South Devon Railway; it produces tin, copper, mundic, tungsten, sulphuret of zinc, &c. It was all worked away above the adit by the ancients, and was a producer of tin, which helped to supply the monthly Ashburton market. In 1847 a few gentlemen, including Mr. Adam Murray, F.G.S., Prof. Ansted, F.G.S., with the late Captain T. Kitto, undertook the re-working of this old mine, by driving a deep adit, believed to be 180 fms., and sunk three shafts—naming them Caunter, Smerdon's, and Kitto's; the first named is 40 fms. deep, and kept by the present adit dry. About three years since, by hearing William Bramble say there was a fine lode of tin in a sink below, only heavily charged with mundic, and would require a strong fire for burning, but that the tin was a very high-priced tin, and that there was a leader 2 in. big solid, caused me to make application to the landlords to be allowed to clear the adit. This I have had done, and safely timbered, the water of the sink pumped out, and tin broken from the lode, which gave by Capt. George Mudge's assay 3 cwts. of tin to the ton of stuff. The above person is a thoroughly practical tin-dresser, and was the renter and dresser of the halvans at Wheal Union Mine, which was advertised in last week's *Mining Journal* for sale at the Golden Lion, Ashburton, on March 27. Capt. James Richards values the lode in the sink at 40*l.* per fathom. Capt. J. Rodda, who undertook and completed the clearing and timbering of the adit, found tinstones about the burrows which produced 7 cwts. of tin to the ton.

The foregoing is stated from facts, and can be proved by all the above, with the exception of the late Capt. T. Kitto; and Mr. Loam, the well-known engineer, who placed a wheel in the mine, told me he heard that the late Capt. Kitto was offered 1400*l.* for his share in the property; and, by referring to the "Mining Almanac" London Share-List, published by the late Mr. English, dated 1849, p. 500, it can be seen that nearly 5000*l.* had been expended, nearly all of which would be for the benefit of any person who would join me in the undertaking of its working. By drawing an example, it can be seen that Whiddon Mine was standing in the Share-List in the Almanac (which I can produce) above the Old Dolcoath by a few hundreds; since which Dolcoath has paid, with the present dividend, above 400,000*l.*, and about three years since was marketable at above 400,000*l.*, and I am constantly told by practical miners—that is, those who know Dolcoath and have worked in Whiddon—that if the mine is properly worked it will prove a second Dolcoath. The champion lode can be traced for miles, and the large caunter lode is copper, situated at the junction of the granite or clay-slate and killas. There is a splendid wheel-pit and part burning-house, flue, &c., with roads already made. The stream of water running by the sett, owned by one of the landlords of the mine, drives nine water-wheels after leaving the mine—and we have always been taught to buy in the cheapest market, and sell in the dearest, which may be done in this. There are a number of things to militate or compensate for the present price of tin—the large quantity of mundic, tungsten, copper, and sulphuret of zinc, and being so near the railway and town miners will take lower wages, not having to pay extra lodgings, &c.—*Ashburton, March* 17. ——— GEORGE SPARKE.

WHEAL AGAR.

SIR,—Being a recent shareholder in this mine, it has occurred to me that you would not take it amiss to have the opinion of an independent party on the property, as it appeared to him at the meeting. About 4000 shares out of 5600 were represented there. I was glad to see that whilst the committee exercised a vigilant control over the finances of the company they did not, as is too often the case, interfere with the manager's duties. The call was rather heavy, but we must take into account that the previous meeting was held nearly nine months since. It was explained that the delay arose from a reasonable desire to see the bottom of the mine. The accounts were all, we were told, charged up, and I looked into them and found it correct. I believe that the rich lode at the shaft is rapidly increasing in value, and notwithstanding the low price of tin Wheal Agar will shortly be classed with the rich mines in the Carn Brea range. I was glad to see that an act of justice was done to one of the committee by voting him a donation of 100*l.* for very valuable services in the interest of the shareholders by his personal services in travelling great distances at much inconvenience, by which the company has saved a very large sum of money. The introduction of boring machinery will certainly succeed when experienced men have the management of it. I look forward with confidence to the fuller development of this property as a good investment.

Brixton Hill, March 18. AN OLD MINER FROM THE WEST.

JAVALI MINE.

SIR,—The splendid results of 855¼ ozs. of gold obtained from 1300 tons of quartz far exceed the most sanguine expectations, and had the quartz been taken entirely from the rich stopes the returns would have been still larger, for only 1000 tons were taken from them, yielding 15 dwts., or ¾ oz. of gold per ton, the difference being just 75 ozs. of gold, which would have made the total to be just 930¾ ozs., and bringing up the profits to something over 1800*l.* per month. It appears that only 20 stamps were running, and that the results of 30 stamps have yet to be calculated; in other words, 50 per cent. has to be added to these proved returns—*i.e.*, 2700*l.* per month profit is not an over sanguine estimate. Surely a quotation of par, or 2*l.* per share, is not presumption in estimating the value of this property. Your correspondent, "Pick," claims nearly 6*l.* as the value of Javali shares, and according to Captain Sohn's belief it would appear that what has been said of Javali of late has not been amiss, and that its praises which have been echoed are more than earned: 32,400*l.* a year (with a calculation based on the working of 30 stamps) seems to prove that the mine will be a second St. John del Rey. Should cheap coolie labour be obtained, and the mills be worked daily (Sundays excepted), 3000*l.* a month will yet be obtained—no extravagant estimate, not assuming the quartz will return gold beyond 15 dwts. per ton—yet to be proved. READER.

March 18.

[For remainder of Original Correspondence, see to-day's Journal.]

Meetings of Public Companies.

NORTH AMERICA GOLD MINING COMPANY.

A general meeting of shareholders was held at the City Terminus Hotel, on Monday,—Dr. STALLARD in the chair.

The SECRETARY read the notice convening the meeting.

The report stated that the serious fears which were entertained last year as to whether the gravel was rich enough to pay a profit for extraction have happily been dissipated by further explorations and repeated tests. Since the last meeting of the shareholders the whole of the gravel left in the yard has been washed, together with 43,067 loads extracted during the season of 1874. Of the 1200 ft. of tailings, 350 were also washed, and yielded 148*l.* The total product of gold was 2290·52 ozs., which realised 8629*l.* 13s. 10d. The gravel opened during the early part of the year not having proved remunerative a large number of miners were discharged, and during the remainder of the season the operations were confined to the search for more productive ground. The general expenses and the labour were from this cause reduced from 14,069*l.* 5s. 8d. in the year 1873 to 9985*l.* 12s. 4d. last year. The cash loss on the year's operations at the mine was 1255*l.* 15s. 6d. But the loss is apparent only, as there remains in the yard the whole quantity of tailings, estimated to yield about 3000*l.* to 4000*l.*

In November and December there was a considerable supply of water, gravel was washed which produced 659 ozs. of gold, the sale of which has sufficed to discharge the indebtedness previously incurred, and to furnish the whole of the supplies for the forthcoming season. In January washing was continued, with interruptions from frost and storms, and at the end of the month the prospects were reported excellent. The directors have continued to repose confidence in Mr. Morgan's management, and they have afforded him every possible assistance and support. But they cannot forget that his sanguine anticipations have not been realised, and that the shareholders have been repeatedly disappointed in the results promised them. The directors have more confidence in his recent reports. The gravel appears to have been prospected with greater frequency and care, and if the promises are not so extravagant they appear more reliable than any before received. Nevertheless, the directors propose to take the opinion of the shareholders as to the desirability of sending out a special representative from this side.

Two notices of motion are appended—one by Mr. J. Simson, and the other by Mr. Samuel Morley, of Alderswasley Hall. Both notices involve an addition to the board of directors, to which no objection can be made. The directors are anxious for any addition which will secure increased confidence on the part of the shareholders, and they have already informed Mr. Morley that they would support his election, and that of any other representative of Nottingham interests. The directors will not oppose the appointment of a committee of investigation, if such should be the general decision of the shareholders. But they do not regard it as either necessary or desirable. The directors have no concealments, and they have offered to Messrs. Simson, Morley, and their friends the opportunity of investigating the whole transactions of the company. As this offer was declined the board will leave the question to be settled by the shareholders.

Prior to the commencement of the business of the meeting, a question arose as to whether Dr. Stallard could legally occupy the chair. It appeared that Dr. Stallard some time since resigned his position "in consequence of irreconcileable difference with regard to himself and his co-directors as to the management of the company." At the ensuing board meeting the resignation was accepted with regret. In the meantime, important changes took place in the position of affairs, and a resolution was passed by the board on Dec. 31 to the effect that, there being a seat still vacant, Dr. Stallard be asked to withdraw his letter of resignation. Acceding to this request, Dr. Stallard was re-elected a director, and re-appointed the Chairman of the board. The opposition to Dr. Stallard occupying the chair was withdrawn, and the business of the agenda was proceeded with.

The CHAIRMAN said that upon the last occasion they were buoyed up with the hope that there would be harmony in all their actions, but he was still sorry to find that they were not unanimous in their wishes. The directors were desirous that the fullest opportunity should be given to ventilate the business which they had before them. The main question really to be determined was whether a committee of investigation should or should not be appointed. It seemed to him that this cardinal question of the day should be set about as soon as possible, as the subsequent action of the meeting would depend upon whether that motion was adopted or not. By means of a map he pointed out the respective points of operation in the mine, and real extracts from Mr. Morgan's latest dispatches. Mr. Morgan stated that he did not think it possible to make it a successful drift mine, and that hitherto there had not been sufficient gold in the gravel next the stratum to make it pay. Had it not been for the Chinese labour and the closest economy the mine would now be in debt $50,000, and the recent works had not answered his (Mr. Morgan's) anticipations, as half the ore now being opened out would not pay for extraction. Mr. Morgan added that he was now disposed to believe the deposit was only suited to hydraulic work, and the chances for that were shut off, as all the water had been located and registered. Mr. Morgan assured the company he had done his best to realise better results, but he was heart-sick and discouraged. He (the Chairman) said the board had done everything that was in their power to support Mr. Morgan in carrying on the work at the mines, and Mr. Morgan had no desire to be considered in opposition to the board, but at the same time it must be remembered that Mr. Morgan had held out hopes, which had been from time to time disappointing in the extreme to the directors. The directors had thought the operations for the washing season should be closely watched, and were still of that opinion. That the property was a valuable one the directors still thought—work not exceeding 1 yard in depth had given 29,000*l.* worth of gold, so that if it were possible to commence "hydraulicing" there seemed every reason to believe it would still prove a profitable investment. He should caution the shareholders against selling the property right off; rumours had reached this side that a body of gentlemen had banded together to complete a 30-mile ditch, and who would like to get hold of this property. He was extremely desirous the shareholders should exercise the greatest caution, and that they should not be hasty in adopting such a policy, especially when there were two other courses open to them. If it were to the interest of a party of capitalists to make a ditch 30 miles long to bring water into this district surely it would be to the interest of this company, as well as to theirs, to become customers for that water. That ditch would be made in a very short time, and it might be to the interest of the mine they had pretty good evidence that the ground was much richer than the south side, and it was just possible that they could continue their operations upon a smaller scale than hitherto. The board asked the shareholders to authorise them to send out a gentleman to act as their representative, and advise what was best to be done in the present position and prospects of the property. With the greatest possible pain he referred to the difference of opinion as to the election of Mr. Simson as a member of the board. He did not wish to make his remarks in any way personal; he wished to avoid that as much as possible. It ought to be sufficient for this meeting to know that day that the whole of last year he had persistently brought the question of Mr. Simson's election before his colleagues, but it must not be supposed that because those gentlemen had taken a different opinion from his (the Chairman's) they were actuated by improper and personal motives. Shortly after this he found put upon the minute-book a notice for a committee of investigation. That was a very serious thing—it was really a vote of want of confidence. The moment he heard that a charge was made he could not forget he had been for two years the chairman of the company, during which he and his colleagues had never received remuneration for their services. As, however, the charge had been made he thought there should be some ground for the charge. The moment Mr. Morley sent in his notice of motion he (the Chairman) wrote to him requesting an interview to look over the transactions of the company from the beginning to the end, in order that he might bring a specific charge if he could. He regretted very much that Mr. Morley had not acceded to that request. The board were perfectly ready for any shareholder to investigate the whole of their operations, and would elect two of the gentlemen to seats at the board. He was prepared himself to propose that the number of the directors should be increased, and that Mr. Birkin and Mr. Morley should be elected. He appealed to those gentlemen whether they would accept seats at the board, for if, on the other hand, a committee of investigation were appointed, the only effect would be to postpone the question of what should be done with their property. No time ought to be lost; surely it could not be their wish to be always quarrelling amongst themselves. After what had occurred, it would not be for the interest of the company to elect Mr. Simson. Mr. Holdsworth held a power of attorney for Mr. Morgan, and after what had been heard to-day—that Mr. Morgan recommended them to sell their property, and it might be that those gentlemen who were about to construct this ditch might be the people who wanted to buy the mine—after, he repeated, those facts were known he would ask whether, under the circumstances, it would be wise to be quarrelling among themselves? The board felt bound to oppose the appointment of a committee of investigation, but if it were appointed the directors would afford all the assistance in their power. He had no interest beyond that which he purchased; they had been misled by the sanguine expectations of Mr. Morgan and Mr. M'Lean—both those gentlemen up to the present time had proved to be seriously wrong. He then moved that the report and balance-sheet be received and adopted.

Mr. GREENHOW seconded the proposition.

Mr. MORLEY proposed as an amendment that the report and balance-sheet be not received and adopted, and that a committee of investigation be appointed, to consist of Mr. Birkin, Mr. Simson, and Mr. Morley. The resolution of which he had given notice was passed at a meeting of shareholders in Nottingham. The object was to enable a committee of shareholders to examine the books, accounts, and correspondence of the company. The desire was to have a complete change of directors, so that the shareholders should get better information—more independent information—than if a part of the present direction were retained. His friends and himself had only one object in view—the benefit of the company. The time had come when there should be an investigation. The property was bonded of Mr. Morgan for 26,000*l.*, and sold to this company for 70,000*l.*, and 10,000*l* would be raised as working capital. He thought he had said sufficient to show how necessary it was to investigate the accounts, and know who had paid for their shares.

Mr. BIRKIN seconded the amendment. He was invited by Mr. Hughes, one of the prime movers in this matter, to join this company. Mr. Hughes represented to him that this was a property about which there was no speculation. Had the property simply turned out a bad speculation they would never have heard one word of complaint from him, but he feared it had not been put straightforwardly before the shareholders. It was said that Mr. Morgan sold the property to the Messrs. Hughes for 26,000*l.*, who re-sold it to this company for 70,000*l.* Taking all the facts into consideration, the *bona fide* shareholders had a right to call for a committee of investigation.

Mr. BARTUM suggested, in order to save time and disappointment, that two independent shareholders should be elected directors, who could ascertain all that was necessary to be ascertained, and then, if necessary, they could go further.

Mr. GLOVER would like to hear, after the very discouraging accounts which had been received as to the state of the mine, what Mr. Hughes had to say upon the subject?——Mr. J. HUGHES said the Hugheses were amongst those who purchased and paid for more shares than any other shareholder in the company.

The CHAIRMAN said he took exception to a great deal that had been said—if the terms were that an enquiry should be made into the origin and formation of the company the directors would not object to it; it was not simply that, but to all intents and purposes a vote of want of confidence in the directors. As to fees, the directors in his time had never seen the colour of a sixpence, and as to the origin of the company, he should be very glad to give every information in his power. The directors had done the best they could under the circumstances, and he thought it very hard to pass a vote of want of confidence for unpaid services. If this resolution was passed it was virtually a condemnation of the board; that was his objection, and his only objection, for he was perfectly prepared to show to Mr. Birkin and Mr. Morley every document in connection with the company.

After some further discussion the amendment was put, when 22 voted in its favour against 6, upon which a poll was demanded. The result was against the amendment.——The CHAIRMAN then put the original proposition to the meeting, and it was carried.

The election of Mr. Henry Hicks to a seat at the board was confirmed, and Mr. Shuter, retiring by rotation, was re-elected. Mr. Boyer, the auditor, was appointed for the ensuing year, at a remuneration of 20*l.*; and a cordial vote of thanks to Dr. Stallard, for his conduct in the chair, brought the proceedings to a close.

BREMER MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Monday,

Mr. CYRUS LEGG in the chair.

Mr. W. H. WYON (secretary) read the notice convening the meeting.

The CHAIRMAN stated that the directors had met that morning, and in consequence of the mail not having arrived it was proposed to adjourn the present meeting until that day week at the same hour. At the present they were not in a position to advise or say anything.

Mr. HAWKINS would regret if, after wasting their time to come to the meeting, they separated without hearing any statement from the Chairman; he, therefore, suggested that he should give them whatever information was already in possession of the directors.

The CHAIRMAN said it was not usual to adopt such a course when the directors told them that it was not expedient.

Mr. PURDY thought that time was important to them all, and was quite sure they would be glad to listen to some statement from the Chairman. He expressed that wish on behalf of those who did not know so much of the company's affairs as himself.

The CHAIRMAN remarked that if the directors had anticipated that there would have been any opposition to the adjournment they would have come prepared; he had no objection to tell them all they knew if the meeting demanded it. On Dec. 24 (the last meeting was held on Dec. 2) they received a telegram stating that there was no improvement in the prospects, that the yield was not paying, and that they awaited further instructions. On Jan. 19 they received another telegram saying "Mine prospects worse, yield not paying, shall we close." To this the directors replied on Jan. 21, directing them to stop the dead work, raise ore, and report further. On Feb. 1 they received a telegram "Dead work stopped. New driving north improved in character in level 103. We await further instructions." The directors had telegraphed for further particulars to lay before present meeting. On Feb. 25 they received a telegram "Want immediate instructions and credit," that was because the directors having sent out instructions for them to limit their overdraft to the ore ready for market, they were necessarily without funds; and on March 4 they received a further telegram saying, "See letter of Jan. 30. New driving in 103 improved in character, and yielding paying ore." They had had no telegram since, and the letter of Jan. 30 had not arrived yet.

Mr. HAWKINS enquired whether the letter Jan. 30 had not been discounted by the telegrams subsequently received?——The CHAIRMAN thought not.

Mr. A. MORRISON said it was stated at the last meeting that they had 9000 or 10,000 tons of ore in reserve, and he could not understand why it was not at once taken away, so that they might have the proceeds.

Mr. PURDY, in supporting the motion for the adjournment, said Mr. Morrison's statement did not exactly represent the position. Their last report expressly stated that the 10,000 tons had been raised. As to the proceedings of the day, he would submit that they should have as much information as possible concerning the property, from Mr. Brind, who had been on the local committee, and could give them information up to a late date. He was now in the room, and it would be convenient to hear him with regard to any particulars.

A SHAREHOLDER remarked that he understood it to have been stated that 10,000 tons had been raised, and that there was 10,000 tons more to be raised.

The CHAIRMAN explained that on Sept. 4 the directors wrote to the colonial committee, and requested telegraphic reply to the questions. What was the number of tons raised since workings commenced? and the reply 10,000 tons. What quantity thereof had been dressed fit for smelting? Answer: 2000 tons. The total amount received for regulus, less paid or owing for ore produced? Answer: 16,903. The estimated quantity of ore in sight? 11,000 tons. Boundy's lode was not estimated. They did not, moreover, value anything below the 103, although, according to the ordinary method of estimating 5 fms. under the ore ground for the entire length would have been included, and they did not value anything above the 93 south, although 40 fms. of backs were standing. This statement of fact, he might remark, was sufficient to substantiate the truth of the prospectus should it be called into question. The 103 north had not reached the soft ore ground gone down above Had they stopes open the backs would pay for working, but not otherwise. The shaft required to be 10 fms. deeper, and Boundy's lode required to be laid open. They were of opinion that the call of 1*l.* last made would have gone a long way.

Mr. J. R. MORRISON read a statement which he had prepared, summarising the statements in the prospectus of the company, but it contained nothing important. Mr. Hawkins remarking that it was useless crying over spilt milk, and that, he thought, it was more useful for the shareholders to try how they could get out of the mine instead of talking about how they got into it. Mr. J. R. Morrison then gave notice that at the next meeting he would move that a committee be appointed to enquire into the circumstances under which the shareholders were induced to subscribe for shares, and to report thereon to the shareholders.

The CHAIRMAN expressed his readiness to include Mr. Morrison's notice of motion in convening the next meeting.

Mr. PURDY would ask Mr. Brind to refer to the position of the mine when it was started by the present company, and to give them any other particulars he could up to the time of his leaving the colony.

Mr. BRIND would prefer replying to direct questions, and he would further say that he had no connection with their mine until some time after the company was started. He was not a shareholder, but had been a member of the local committee, and he knew how high the reputation of their manager stood; in fact, he was the foremost mining man in South Australia. In the case of the Bremer Mine he had no doubt been disappointed, but he ventured to say that no single statement had been made which he did not believe to be true. When it was found that the mine was not turning out as had been hoped, it was suggested that it should be inspected by some other mine manager; and the committee said that they did not think the company justified in incurring the expense of such an inspection, which they considered altogether unnecessary. Mr. Hallett, however, urged that the inspection should be made, and the manager of the Moonta was selected. It would be impossible for a report to have been of a more favourable character, and he expressed a confident opinion that, notwithstanding the unfavourable position of the mine at the moment there was a good prospect of success. He fully justified all that Mr. Hallett had done up to that time. The recommendations made were not carried out. From that time Mr. Hallett's operations had been restricted to making the mine pay costs. He believed himself that the instructions sent out for some months past to limit output to the cost was unwise. The ore was in sight, no doubt, but much work had to be done before they could advantageously put men there to raise it. At present it would probably cost 20*s.* to raise 1*l.* worth, or more, but in mining it was necessary to work through poor ore, or even no ore, if they wanted to make a profitable mine. In the last advices received, Mr. Hallett referred to the improvement in the 103. The disappointment there had been that the good ore expected in that level from the appearance of the ground above it had now been met with. He supposed it had now been met with, and it was likely that he had come upon a deposit which would pay for working, but it did not follow that it would pay all the expenses of the mine. If it turned out to be rich ore it would pay to raise some of the poorer to work with it; but up to the present time the country had proved harder than expected, and the ore had proved less valuable than anticipated.

Mr. A. MORRISON asked what was the value of land there.——The CHAIRMAN in elucidation of the question, explained that the company owned about 16,000 acres of surface, about 900 acres at Worthing and the remainder at Bremer, and it was the value of this, apart from its mineral value, that Mr. Morrison desired to know.

Mr. BEIND said that the Worthing land was probably worth 3*l.* to 3*l.* 10s. per acre but the Bremer was not worth so much, perhaps 35s. or 40s. per acre.

The CHAIRMAN believed there was a probability of a railway going near Bremer.

Mr. BEIND said it might go that way; there was an intention of forming a line to connect Adelaide with the Murray river, and the Bremer route was one of those suggested.

After some further conversation, the motion for adjournment was agreed to.

IBSTOCK COLLIERY COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday,

Dr. STALLARD in the chair.

Mr. J. BATTEN (the secretary) read the notice convening the meeting.

The CHAIRMAN explained that the object of the present meeting was to confirm the special resolutions passed on March 3, the details of which appeared in the Journal. He begged to move that those special resolutions be confirmed.

Mr. THORPE asked the difference in the acreage of the coal properties now received from Mr. Whetstone and that already supposed to be purchased?

Mr. BILLINGHURST (the solicitor) that the coals given up were 30 or 40 acres, and that given was about 30 acres, but there was a reduction of 1000*l.* in purchase-money. It was, however, a very doubtful question if Mr. Whetstone had made any concession whether it could have been enforced, as Mr. Whetstone had power to rescind the contract altogether. It was evident when the plans were examined it was a mistake, and he considered great credit was due to Mr. Whetstone for the extremely equitable, and at the same time gentlemanly, manner in which he met the difficulty.

Mr. THORP asked if any accounts had been published up to the end of the year?

The CHAIRMAN: No, Sir.

Mr. THORP said it was extremely inconvenient for the Leicestershire shareholders to attend the meetings in London.——The CHAIRMAN said that would never be the case again, as the whole of the company's business would be conducted at the colliery, and the meetings held either at the colliery or in Leicester.

Mr. THORP was not quite satisfied that the convening of the two meetings upon one form was quite legal.——Mr. BILLINGHURST said there could be no question upon that point.

Mr. THORP had been desired to ask if it were possible to postpone this meeting, so that it might be held in Leicester. He did not think the shareholders were fairly represented at this meeting, and he considered it would be to the interest of the company that if possible it could be held in Leicester.

The CHAIRMAN thought it would be out of their power to adjourn this meeting. The stringency imposed upon them with respect to special resolutions was very considerable; for instance, it was imperative that they must be confirmed at a meeting held not less than 14 days but within a month of the date at which they were passed, and also that the confirmatory meeting be held at the same place The object of this no doubt was to communicate the information to the shareholders that the resolutions would be submitted for confirmation at a particular time and place. If those resolutions were not confirmed to-day it would vitiate the whole affair. As to the accounts, he did hope that in future they would be more regularly published. At the first meeting the importance had been pressed upon Dr. Thomson [by the directors of publishing accounts more frequently, and he (the Chairman) hoped that Dr. Thomson, now that he was managing director, would carry out what he himself had urged as of the first importance—in other words, carry out his own suggestions.

Mr. WILKINSON having seconded the proposition for the confirmation of the special resolution, it was put, and carried unanimously.

The CHAIRMAN said he wished to mention that in referring at the last meeting the appointment of Dr. Thomson as managing director he had not in any way intended to throw the slightest reflection upon Mr. Watson, who had tendered his resignation. He (the Chairman) could only say that their relations with Mr. Watson had been of a most friendly character throughout, and Dr. Thomson had endorsed the judicious nature of the great improvements effected by Mr. Watson since his management. This was obvious from the great increase contemplated in the output—from 800 tons, whereas it was now calculated to augment it to 1800 tons weekly. They had, moreover, the power, if necessary, to still further increase the rate of production by working two shifts—the whole of which was due to the improvements effected under Mr. Watson's management. He (the Chairman) would be very sorry if Mr. Watson supposed he had any desire to depreciate his ability or services in any way—on the contrary, he should be glad to forward his interest wherever possible.

A vote of thanks to the Chairman closed the proceedings.

SOUTH CONDURROW MINING COMPANY.

A general meeting of shareholders was held at the offices, Austinfriars, on Thursday,—Mr. MARSHALL in the chair.

Mr. HICKEY (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

The accounts for the four months ending with the costs made up to Dec. 26 showed a profit of 1391*l.*; charging up an extra month's cost, up to Jan. 22, the credit balance amounted to 1054*l.* 16s. 6d. At the date of the last meeting the merchants' bills were 5080*l.*, and the present amount was 2520*l.*

The following report was then read:—

March 17.—In handing you a report on the principal operations since your last general meeting, we beg to state that we have re arranged the pitwork in the 93 at King's shaft, we have also cleared out, well timbered, and fixed tram-road in the 93 cross-cut south, and have extended it towards the great tin lode about 11 fms.; we would here observe this cross cut having been left idle for the past five or six years it was full of debris, and required a good deal of new timber. We consider that by extending the 93 south some 10 fms. it will intersect the great tin lode, and which we hope to reach in about a month from this time. The driving of the 82, east of cross-cut, has lately been resumed by six men; the lode in the end is worth 15*l.* per fathom. The 82 east is a favourable feature in the mine, as there is a great extent of unexplored ground in this direction. A stope in the back of this level is worth 10*l.* per fathom. Owing to the cross-cut to reach the tin lode having been driven some 40 fms. to the west of King's shaft, we have now about 30 fms. to drive east before we reach a point due south of the shaft referred to. The lode in the 83 end, west of King's, is worth 30*l.* per fathom; we have an opinion the main part of the lode is still standing south, and have put the men to prove this. The lode in the rise in the back of the 82 west is worth 80*l.* per fathom; it appears as if there is a junction of a south lode with the main tin lode at this place; the south part appears to be diverging from the main lode above the 82, if it continues in this direction it will be found standing south of the main lode in the shallower levels of the mine. We cannot, however, speak positively on this matter till the lodes have been further proved in the back of the 82 already mentioned. We commenced a trial winze in the 70, east of King's, but the lode hitherto is poor. We have started a 70 fm. level, east of winze, at the point of intersection of a small perpendicular lode with the main tin lode; this is opening out paying ground, the lode in the end is worth 12*l.* per fathom, and is in favourable ground. The 70 end, west of King's, has passed through a good shoot of tin, but is for the present in a hard bar of ground, and is comparatively poor, being worth 9*l.* per fathom. We have put up a rise in the back of the 72, and have communicated with Vivian's shaft, which has assisted the ventilation; the lode in the rise referred to has varied in value from 7*l.* to 20*l.* per fathom. We have lately started a 60 fm. level, west of Vivian's shaft, at the point of junction of the West Basset lode with the main lode; the ground is moderately easy for driving, and the lode worth 10*l.* per fathom; we would here remark the great tin lode is standing in whole ground to surface above this point; as soon as the 60 west is advanced a short distance we intend to stope the back and prove it above this level. The lode in the 60, east of King's, has a very promising appearance; we consider it a good speculation to urge on this level eastward; the winze in the bottom of this level yields a little tin. We have kept on six men in the 60 cross-cut north; this level has been extended 120 fms., but nothing of importance met with, we, therefore, propose to suspend operations in this direction. We have started a cross-cut south of Fraser's shaft, at the 30, with the view to intersect Fraser's lode; the ground is easy for driving, and we think to intersect it in driving 3 or 4 fathoms. The lode in the 30, east of new shaft, yields low quality tinstone; the ground, however, is favourable for exploring. In the deep adit level, west of junction shaft, the lode has recently improved, now worth 10*l.* per fathom. The present price obtained for the tin is sadly against the profitable working of the mine. We have sold since your last general meeting about 151 tons (besides the stock account which had been previously credited); these sales at the average price of the past few years would have left a good profit to divide in addition to charging up the extra month's cost—1272*l.* 12s. 9d. In taking a review of the underground prospects of the mine, although our western ends are not for the moment so rich as they have been, yet the 60 west, as well as the 70 and 82 east, are opening out productively. We expect, too, in about a month to intersect the lode in the 93 cross-cut, which at this point has hitherto not been seen below the 70. The 93 will intersect it fully 40 fms. deeper when measured on the dip or underlie of the lode; we hope this cross-cut will soon open up a valuable section of tin ground.—WM. RICH, WM. WILLIAMS, H. ABRAHAM.

The CHAIRMAN, having mentioned that the accounts had been professionally audited, stated that the price of tin had been much against them; they had, however, thought it desirable to realise the stock on hand, but in selling it had exercised some little discretion in holding back occasionally whenever an advantage could be obtained in so doing. If the price of tin was maintained, there seemed every prospect of showing profit. The committee had appointed Capt. Rich the manager and Messrs. Pike and Son local pursers; those appointments were made preliminary in the first place, but had since been ratified.

Capt. RICH, in reply to questions from Mr. E. J. Bartlett, stated that there were 40 men employed in stoping, but a somewhat larger number on tutwork, more having been put on recently. When he took the management the stock of tin was about 35 tons. Stoping east of Williams's shaft was going on upon tribute. The bunch of tin in the back of the 71 was not very rich. The reserves were not very large, as stoping had been carried on pretty close up to the ends. He should think, however that since the last meeting the reserves had increased. He should hesitate to give any valuation of the reserves, as it must necessarily be fallacious. The additional exploratory works now being carried on were: Driving the 93 south cross-cut, by six men; the 82 east, by six men; sinking the winze at the bottom of the 70, by four men; the 60, by four men; the rise against King's shaft, by four men. There were about 172 hands employed. Some tributors had left, but the tutwork had increased.

The CHAIRMAN reminded Capt. Rich that he had not mentioned that they had been driving two levels east that were not being driven before.

Capt. RICH further added that the stock of tin at the last meeting was about the amount stated. The quantity of tin now being raised was about 35 tons per month.

Mr. BARTLETT admitted that the answers given by Capt. Rich were satisfactory. He had put these questions to show that he had a good reason for the course which he adopted at the last meeting, although he was defeated. He felt he was perfectly justified in the course he had taken. It was clear that Messrs. Vivian and Sons had had to contend against high wages and a low price of tin. Although under the present management the cost had been reduced, the mine had not in any way improved; and at the time the change was being made the question of increased wages was not considered, nor was the reduced price of tin. The question was as to how the improved balance had been arrived at—Capt. Rich had not shown that he had opened out more ground than he had taken away; but, on the contrary, that the reserves had been entrenched upon to a considerable extent. He was not saying a word against Captain Rich; but, at the same time, he considered justice should be done to the late managers, who carried on the mine in such a manner as to have enabled Capt. Rich to get such a quantity of tin as to show a good profit.

Capt. RICH could not see how he had encroached upon the reserves when he had more than doubled the tutwork. He would not give any value of the reserves, because all such calculations were fallacious—he was not going to say a word against his predecessors, he supposed they did their best, and he should do the same. If he were instructed to value the reserves he would gladly do so, but such estimates were necessarily misleading.

Mr. BARTLETT asked Capt. Rich if he were prepared to state he was not picking out the eyes of the mine?——Capt. RICH: Most distinctly. He could at once return more tin if necessary. If they wanted to pick out the eyes of the mine they most certainly would not drive the several ends to which he had referred, because they had been abandoned poor, and were not rich now.

Mr. WESTON (a member of the committee) repudiated the idea that anyone should for one moment think the mine was being worked unfairly.

The accounts were passed and allowed, and with the report were ordered to be entered on the minutes.

Upon the proposition of Mr. WALTON, seconded by Mr. WEARNE, the committee of management were re-elected.

The CHAIRMAN said the committee did not think it was desirable to recommend a dividend upon the present occasion, but carry the balance forward to next account. With regard to the balance brought forward from the last account, the committee had had to charge up 560*l.* on account of bills incurred between May and September last year, otherwise the credit balance would have been still larger.

A vote of thanks to the Chairman and committee closed the proceedings.

DEER PARK MINING COMPANY.

An extraordinary general meeting of shareholders was held at the company's offices, Moorgate-street, on Wednesday,

Mr. J. C. PARRY in the chair.

Mr. E. T. R. WILDE (the secretary) read the notice convening the meeting.

The CHAIRMAN explained that there was a meeting on Feb. 23 at which but three shareholders were present, yet, from the report which had been previously issued, they were all aware of the position of the company. The appeal to the shareholders from time to time for further capital had proved unavailing, and the directors had now no course left open to them to decide whether they would carry on or wind up. The meeting was called "for the purpose of considering the present position of the mine, and to take such steps as may be approved of for raising further funds, or to pass a resolution to wind up the company voluntarily." If every shareholder would undertake to subscribe for ten shares of 2*l.* each it would suffice for the present to carry on the operations at the mine, and might also bring them to the lode; if that were done additional capital might then be raised on debentures, and the property made permanently remunerative. He would be glad to hear any suggestions from the shareholders which they might be disposed to offer.

A SHAREHOLDER remarked that he wrote to the directors, and offered to take an additional 55 shares provided the other shareholders took their proportion. He would, therefore, be glad to know how many out of the 1000 offered had been accepted.

The CHAIRMAN said that the number was only between 240 and 250, including the 55 shares the shareholder had mentioned. The board asked that 1000 might be subscribed for, but they found that but few responded, although some few were disposed to go into the matter heartily. They had hoped with the last capital raised to have struck the lode.

Mr. DEACON said that two years ago it was stated that they had struck the lode, yet now they were told that if each took ten shares of 2*l.* each they might reach the lode.——The CHAIRMAN explained that it was between the 30 and 40 fm. levels that the lode was struck two years ago, but that it did not hold out, and they were now looking forward to cut it at a lower level.

Mr. A. GRAY remarked that the directors had always subscribed for their full proportion of the shares of each issue, and had received no fees for the last two years, so that they had done all they could for the interest of the shareholders.

Mr. STRONG thought that there were many friends who might feel disposed to provide additional money if they were fully satisfied with the prospects of the mine; he would, therefore, suggest that a committee of shareholders should be appointed to select an engineer altogether independent and unconnected with the mine to go down and make an inspection, and report thereon to the shareholders. If Mr. Deacon and some other gentlemen were appointed the committee the result might be to induce him and others to lend their assistance.

Mr. DEACON said that there had been but 29*l.* 10s. worth of tin sold since the company had been in existence, yet it might be worth while before abandoning the concern to carry out Mr. Strong's suggestion.

Mr. GRAY would remind them that if the proposition were adopted arrangements would have to be made to prepare the mine for the inspection. No engineer could see through 18 fms. of water, and at present there are 18 fms. of water in the mine. He was speaking to a large shareholder recently, who explained that he did not doubt from what had been observed that the lode had changed its underlie merely, and had not broken up in branches. At the 40 they had driven on it for 150 fms., so that the existence of it could not be doubted. At the lowest point they had seen it had proved not worth working, but this, he thought, might be accounted for. Instead of its being a tin and copper mine, as originally supposed, it would, he believed, prove to be a copper and tin mine. Capt. Goldsworthy had given his opinion that in the next 20 fms. driving they would open upon the copper lode. There are from six to ten lodes in the sett, and a few fathoms further driving might give them a good deposit of ore. Capt. Goldsworthy considers that the shares were at present worth their par value more than ever. He believed that 2000*l.* further expenditure would entirely alter the position of the mine.

A SHAREHOLDER remarked that they could not carry down the shaft under 25*l.* or 30*l.* per fathom, he would, therefore, suggest that they might bore in order to see whether the lode was worth working.

Mr. GRAY said that at present the sinking of the shaft was not necessary. They were already 58 fms. from surface, and that was a very fair depth.

Mr. STRONG enquired what would be the probable cost of driving to the gossan lode?——Mr. THOMPSON presumed it would not be large, as Capt. Goldsworthy stated that they would probably reach it in the next 20 fms. driving.

Mr. DEACON asked whether there was any prospect of selling the mine and plant as it stood?——Mr. GRAY considered under any circumstances it would be preferable to have the engineer's report before they raised the question.

The CHAIRMAN said that Capt. Terrill went to the mine on behalf of a shareholder, but without giving notice. The consequence was that he must have found the mine full of water, and no one there to receive him; he would probably report his principal to that effect.

Mr. THOMPSON said that when the shareholder expressed his wish to have the mine inspected a special meeting of the board was immediately called, in order to see whether they could get the water out, but before they had time to make any arrangements he had been and gone.

Mr. YOUNG enquired what would be the cost of forking the water, and getting an independent engineer to inspect and report upon the mine?——Mr. J. WRIGHT, C.E., said that the water could be forked in 24 hours, so that the cost of forking the water, and getting (say) Capt. Josiah Thomas, of Dolcoath, to inspect and report, ought not to exceed 40*l.*

It was then proposed by Mr. STRONG, seconded by Mr. DEACON, and unanimously resolved, that a committee of five shareholders be appointed for the purpose of selecting an engineer to inspect the mine, and to report to an adjourned meeting; and upon the proposition of Mr. YOUNG, seconded by Mr. WRIGHT, Messrs. W. M. Deacon, Ince, J. Burbidge, A. T. Popham, and Dr. George Edgelow were appointed the committee.

Mr. WILDE expressed his willingness to render his assistance to the committee, and to let them have the use of his offices, and the meeting was then adjourned until April 14.

ST. AGNES CONSOLS MINING COMPANY.

An extraordinary general meeting of shareholders was held at the London Tavern, on Tuesday, to consider, and if approved to pass, the following resolution—"That the capital of the St. Agnes Consols Mining Company (Limited) be increased by the issue of 1200 new shares of 5*l.* each, bearing a preferential dividend of 10 per cent. per annum, and after that ranking for dividend equally with the ordinary shares of the company; and further, that such preference shares be offered to the members of the company in proportion to their present holdings."—Mr. JOHN B. REYNOLDS in the chair.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said that when they last met a resolution was submitted which was not carried, but instead of it an amendment was put and passed, the principle of which was illegal. The same principle, however, was involved in the resolution. Shareholders had had a circular giving the particulars, so that he need say no more either about that resolution or the amendment. The resolution he was now about to submit was strictly within the powers of the Articles of Association, and about the legality of which there could be no question. He had taken the opportunity of consulting with two or three of the largest shareholders upon it, and he believed the present proposition would be unanimously supported. He tried at the last meeting to show how necessary it was that all their proceedings should be unanimous, and he hoped as long as he had any connection with the company the whole of their proceedings would be marked with that unanimity which was the great safeguard of all public companies. The shareholders would be glad to hear that the discovery reported at the last meeting was even a more important one than they then thought. Since the last meeting, the lode going in the westerly direction had improved in value to something like 18*l.* per fathom, and the lode in the northerly direction—the same lode—had increased in value to about 10*l.* or 12*l.* per fathom. It was of no use trying to disguise it—even were they so inclined—that this discovery was one of the greatest importance which had taken place in Cornwall for some years past. In consequence of it more labourers would be employed, and other beneficial effects realised. They had this satisfaction—and it was a satisfaction—that after waiting so long and working so hard for the attainment of most important objects, such results were at last opening out before them as seemed likely to prove satisfactory to all concerned. The additional capital would no doubt be very freely subscribed for, the more so because of the terms offered, which to some might appear excessive, but which to him, taking into consideration the distaste for this kind of investment, were not at all less than they could prudently offer. He could assure them that in all the proceedings connected with this company there was not a step taken without most earnest thought, and in speaking to-day he was speaking not only to those present but to those elsewhere; and he was sure when they looked back upon the reports from time to time issued it would be readily admitted that all the calculations had been most guarded, and if they had not been correct in their anticipations the mistake had been on the right side. Of course there was something accidental in that circumstance. He told them when he met them before that he did not know that this No. 1 lode in Wheal Kitty passed through the St. Agnes Consols sett, but it now transpired beyond doubt that it did. They had the main Wheal Kitty lode still before them, and they hoped to cut it in the shaft within the time mentioned at the last meeting. If the shareholders wanted to be satisfied that the operations were going on satisfactorily this increase of capital in itself was an indication of satisfactory progress, and which must in their case lead to decided success. Additional stamping power would be required in consequence of this discovery, more stamping power than they had ever thought they would have required; that would involve some considerable expenses. And then it was imperative to at once put up a drawing-engine, which would cost something like 800*l.* Taking these things into consideration, and bearing in mind the modern improvements for working mines, of which they would not be slow to avail themselves, but which would involve an immediate and increased expenditure, shareholders would agree with him that to render the financial position of the company thoroughly secure they were wise in advancing from 4000*l.* to 6000*l.* in their estimate. He then moved the resolution embraced in the notice convening the meeting.

Mr. WOOLLEY seconded the resolution.

Mr. BUDD asked how it was that a resolution had been brought forward to-day at variance with that unanimously passed at the last meeting? Not that he objected to the present resolution, indeed he did not know that he would not prefer it, but he should like to know in what respect the resolution of the last meeting was illegal. It was to him a source of great gratification to find the mine in its encouraging position, for which every shareholder had reason to be satisfied, and more than satisfied.

The CHAIRMAN said the illegality of the first resolution consisted in this. It was proposed to guarantee a dividend whether the mine paid profits or not, whereas it was a fact that they had no power to declare dividends except out of profits.

Dr. MANNING assumed that by this resolution the preference shares would receive out of the first profits 10 per cent., and then share equally with the ordinary shares.

The CHAIRMAN said the resolution simply meant this—those who subscribed the preference capital would receive 10 per cent. per annum more than the ordinary shares, should the profits admit of it. As to those who might not be able to avail themselves of this new issue he had given them as much consideration as he had those gentlemen who would take large numbers of these shares. He was sorry he had not been able to protect their interests better that he had done. For his own part he would not hesitate for a moment, if he could afford it, to work the mine on his own responsibility. There might be others of the same opinion, but it must be remembered there were others who did not so believe, so great was the prejudice against mining. He did not believe they should be doing right in running a risk by offering this capital on less advantageous terms than proposed.

Dr. MANNING asked how it was proposed to allot and call up this capital?

The CHAIRMAN said that each shareholder would be offered his *pro rata* interest, and at the same time asked whether he wished to take any more than his allotment, and if so how much. As to how the capital would be called up, that was a matter of detail for the board to decide.

The resolution was put, and carried unanimously.

Capt. W. VIVIAN (the manager) said that he told them at the last meeting they had a new course of ore. He was now happy to be able to say that this course of tin had since then continued to progressively improve. The lode in the 72 west was now worth 18*l.* per fathom for tin, and driving north it was worth 10*l.* per fathom for copper. He did not call those small improvements in these days, this lode having been cut rather unexpectedly, although just in the place where he thought it would be cut, and if it continued he believed it would prove to be just as good as they would like to have it—if it continued to improve as it had done during the last month. They must have more money to work this lode, which in Wheal Kitty had yielded a profit of about 80,000*l.* when tin was much lower than now, and he did not see why it should not be quite as productive in St. Agnes Consols. The main object of the mine was still before them; they were pushing down the shaft, and from those two lodes there was no doubt St. Agnes Consols would become one of the best mines in the county of Cornwall; he had no doubt all their anticipations would be realised.

Mr. BUDD had much pleasure in proposing that the best thanks of the shareholders be accorded to the Chairman and directors for their satisfactory and successful conduct of the affairs of the company.

Dr. MANNING seconded the proposition, which was put and carried.

The CHAIRMAN appropriately acknowledged the vote.

The meeting then separated.

GREAT WHEAL LOVELL MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, Gresham Buildings, Basinghall-street, on March 13,

Dr. BOLEY in the chair.

Mr. G. SHARP (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

The statement of accounts for 16 weeks, up to Jan. 2, was submitted. The report of the agent was then read.

Capt. Joseph Prisk has no hesitation in repeating what he said in his report, which appeared in the mining papers of the 20th inst.—"That by sinking 15 fms. or so the lodes and branches in this part of the mine will be together, and form one masterly lode, as was the case in the old Wheal Lovell lode." Number of hands employed:—Tutwork, 42 men and 3 boys; tribute, 3 men and 1 boy; enginemen, 2; landing and filling, 2; spalling, 1; general surface work, 1; smith, 1; and at stamps, 1 man, 6 boys, and 5 girls: total 68.

Mr. BIDDER moved that the accounts be passed and allowed. He had examined them carefully, and knew they were correct.

The CHAIRMAN seconded the proposition, which was carried.

Capt. PRISK, in reply to questions, stated that the south lode would open up a new mine. They had been working under great disadvantages, but which had been remedied by the communication effected, and they would be able to raise more tin at a less cost.

Mr. BIDDER asked how many men were employed underground before the last account?——Capt. PRISK: 30, but since then there had been nearly 50, although the number was reduced some four or five the last setting-day.

Mr. BIDDER (a holder of more than half the mine) said that seeing the permanent charges of a mine were pretty nearly the same whatever the extent of the operations, it was always the most economical policy, although it made the cost heavy for the time, to employ as many men as they could. It had been a very heavy burden, but they had put on extra men whenever they could be advantageously employed, so as to rapidly develope the mine—thus they had been able to do as much work in four months as previously in six months.

Capt. PRISK said that one point alone, which had not returned any tin, had incurred an expenditure of 50*l.* per month. That point, however, had been completed, by which the costs would be considerably lightened, and the returns increased. The general prospects of the mine had much improved. His own opinion was that in depth the lode would be better defined and more regular, the same as had been the case in Old Wheal Lovell, in which mine he had worked. Old Lovell was worked by different companies above the 34, but the last company sunk to a depth of 60 fms. from surface, where the lode commenced to be very rich, and continued so to a considerable depth. As far as he could judge the lode in the shallow levels in Great Lovell was the same as in Old Wheal Lovell, and he was clearly of opinion that in depth the branches would form one good lode, and open out a good mine. The Old Wheal Lovell lode was a parallel lode, about 50 fms. south. In the 24 the lode was 1 to 2 ft. wide, and in the 34, about 3 ft.; in the 44 it was 6 ft. wide. The whole of the lode could be sent to the stamps by picking out some of the rough capels. He proposed to drive on the 44 east a little further until it communicated with the 34 winze, which could be done in three or four weeks. They would then sink on a lode 6 feet wide; that would be about the place for a shaft. The winze would be carried long enough for a shaft, and the latter could be sunk for 12*l.* per fathom. The lode would more than pay for sinking, as some portions of it were very rich.——Mr. BIDDER said that during the last four months more than 80*l.* worth of tin per month had been returned.——Capt. PRISK saw his way to increase that return; if the points continued to look as now that quantity would be increased considerably.

It was mentioned that the selling value of the machinery was about 1200*l.*

The accounts were passed and allowed, and with the report were ordered to be entered on the minutes.

A discussion took place as to the amount of the call, during which it was mentioned that the deficit upon the four months being 695*l.*, a call of 10s. per share would give 700*l.*——Mr. BIDDER said the mine should be carried on with energy.

Capt. PRISK had no hesitation in saying that the mine was in a much better position than ever before.——A call of 10s. per share was made.

A vote of thanks to the Chairman closed the proceedings.

TRETOIL TIN AND IRON MINING COMPANY.

The annual meeting of shareholders was held at the Globe Hotel, Whitehaven, on Saturday. The report of the directors and statement of accounts for the past year were unanimously passed, and a discussion ensued as to the position and prospects of the company, during which it was stated that the mine was thoroughly proved and well opened out by means of a shaft and levels, and that the production of the

tinstuff averaged about 30 lbs. of tin to the ton, which was equal to the produce of the famous Carn Brea Mine, which had in one year paid to its shareholders as much as 50,000*l.* in dividends. It was, however, stated that to enable the ore to be dressed in satisfactory quantities a further outlay would be required to extend the dressing-floors and provide additional appliances for dressing the tin.

At the close of the ordinary business the meeting was made special, for the purpose of considering the ways and means of discharging the present liabilities of the company, and providing the necessary additional capital.

Mr. J. Postlethwaite, jun., was re-elected a director of the company, and Mr. Wm. Grisewood, of Liverpool, and Mr. Johnson, of the Clydesdale Bank, Whitehaven, were elected auditors for the ensuing year.——After some discussion it was decided that the unissued shares, 5863 in number, be allotted *pro rata* to the present shareholders, and that the balance remaining unsubscribed for should then be offered to the public.—A vote of thanks was passed to the directors, and acknowledged, and the meeting separated.

CARIGGAN ROCK TIN MINING COMPANY.

The first annual meeting of shareholders was held at the Globe Hotel, Whitehaven, on Saturday. The report of the directors and the balance-sheet were unanimously passed. The mine was stated to be in a most satisfactory condition, the erection of substantial machinery and dressing floors having been accomplished, and the mine being rapidly developed. Sales of tin had commenced in October last, and had increased in quantity every month since.

Mr. J. Postlethwaite, jun., Mr. J. F. Pagen, and Mr. William Pagen were re-elected directors of the company, and Mr. W. Grisewood was re-elected auditor for the ensuing year, with the addition of Mr. Hetton, manager of the Bank of Whitehaven.—Votes of thanks were passed to the directors, and the meeting separated.

BROOKWOOD MINING COMPANY.

At a general meeting of adventurers, held at the purser's office, Liskeard, on Tuesday (Mr. Richard Hawke in the chair), the accounts for 20 weeks to Jan. 1, showing a profit of 809*l.* 12s. 3d., and also a balance in favour of the adventurers to the same date of 1025*l.* 18s. 2d., were passed, and a dividend of 4s. per share declared. The following report was read to the meeting:—

March 16.—We are driving north at our 120, and believe the main part of the lode is still before us. We have passed through a branch of spar and capel, with a little copper in it, but not being fully satisfied shall extend the cross-cut a fathom or two more. The lode in the 110 west is 5 ft. wide, and worth for copper 20*l.* per fathom. The lode in the 110 east produces good stones of copper, and looking at the nice channel of ground about it I anticipate soon a paying lode. The lode in the 100 west is worth 8*l.* per fathom; there are three stopes working in the back of this level, yielding on the average 4 tons of copper per fathom, or worth 20*l.* The lode in the 100 east is 4 ft. wide, and worth 15*l.* per fathom; we are rising in the back of this level 4 fms. behind the end, in a lode worth 30*l.* per fathom; the air being close and light in this end we are anxious to get up to the 90, and when communicated will thoroughly ventilate this part of the mine. The lode in the 90 east is 3 ft. wide, and worth 10*l.* per fathom; this end is 20 fms. behind the 100 east, hence we may expect a good run of orey ground in this direction. We shall push on the 90 end with a full pare of men to reach the rise referred to in back of the 100 east. The stopes in back of the 100 and 90 will yield on the average about 4 tons of copper ore per fathom. I am glad to be enabled to say that the mine maintains its value, and the returns and profits for the future may be expected, provided no serious drop in the standard occurs.—T. TREVILLION.

DOLCOATH MINING COMPANY.

A meeting of the adventurers was held at the account-house on Monday. The Rev. W. W. BUTLIN presided, and there was a large attendance. The proceedings were rendered of a somewhat lively character by the introduction by Mr. W. H. Rule of the matter of the coal supply of the concern, and were made especially satisfactory by the declaration of a dividend, which, although small, yet in these times is particularly acceptable. The accounts showed a profit on the three months' working of 2050*l.* 19s.

The committee recommended that a dividend of 10s. per share, amounting to 2148*l.*, and leaving a credit balance of 203*l.* 18s. 2d., be declared; and on the motion of Mr. WHEAR, seconded by Mr. ROSEWARNE, the recommendation and reports were adopted.

Mr. RULE asked what price the agents were paying for coal.——Capt. J. THOMAS replied 21s.——Mr. RULE: Is that the price paid during the last three months?——Capt. THOMAS: Yes, I believe so.——Mr. RULE: What quantity do you use per month?——Capt. THOMAS: From 750 to 800 tons.——Mr. RULE: What is the quantity we have averaged per month for the last six months?——Capt. THOMAS: About 750 tons in the winter, and 700 in the summer.

Mr. RULE was of opinion that the price charged for Dolcoath coal was much to high. They had been purchasing from a certain quarter, and they must all agree, when they looked first at the price and then at the quality, that the charge was most excessive. It was said that the price had been raised from 19s. to 21s. per ton, consequent upon the strike, and being a large shareholder in Cornish mines he had made it his business to institute enquiries as to what the cost of the commodity should be, and he had ascertained that they could get coal much cheaper and of a far better quality than that which they were now burning. He had himself imported a cargo into West Seton, and he was in a position to guarantee that as being 10 per cent. better in quality and 10 per cent. cheaper too than what they had been charged for in Dolcoath. Looking, then, at the price of tin and the condition of mining generally in the county he urged that it was especially necessary they should take up the matter and put a stop to the monopoly which had been crushing their operations. See what had been done to the east of them in regard to the supply of a certain mine. The adventurers had been unable to sustain the charges for materials with which they had been debited, and the merchants had actually driven them into the Stannaries Court. Such proceeding as those must be put a stop to and he was there that day, representing a large number of shares, to initiate the attempt of putting a stop to the monopoly which now existed. Look at other mines and see what was saved by their importing the coal they required. Take West Basset for instance; here Capt. Evans had himself informed him within 12 months they had by the importation of their own coal alone effected a saving sufficient to pay for three boilers costing 900*l.*, and they had still a surplus in hand. Then look at the consumption of West Basset and that of Dolcoath. West Basset only burnt 500 tons a month; here they burnt over 700 tons a month, and if the former could save just 1000*l.* a year, why they could save over 1500*l.* (Hear, hear.) As to the quality of the coal, put the question to Mr. Lean, the reporter upon their engines, and he would tell them that their engines had not done so much duty for the last 20 years as they did in 1845 by some 30 per cent.

Captain THOMAS: What engines?——Mr. RULE: The engines throughout the county. Then it became a question, How did this arise? Mr. Lane said they were burning one-third too much coal for the duty the engines were doing, and the only meaning they could possibly attach to that was that the coal they were burning was mere rubbish, such as nobody else would use, or else that their engines and pitwork were out of repair.——Capt. THOMAS: Let us understand what engines—those on the mine or those in the county.——Mr. RULE said he alluded to engines generally, and he argued that it was owing to the quality of the coal alone that they not get the work out of the engines they should do. The coal sent into the mines was too much exposed to the effects of wind and water, and he had it on the authority of Captain Boyns, of St. Just, that by that means alone it lost some 20 per cent. of its burning powers. This exposure would be avoided if they imported their own coal; they could have it shipped direct from the collieries, housed, and carted to the mine, and so save the great amount of waste which they now had to deplore. He did not know exactly the quality of the coal brought into Dolcoath, but several of his friends had taken and tested samples of coals sent into mines, and had found 15 per cent. of water in the article. That was a matter of the greatest importance to the shareholders in Dolcoath, especially when they looked at how many there were dependent upon the profit made by the mine for their actual livelihood. He had received a letter from Mr. Mark G. Pearce, of London, in which that gentleman said the hands of the managers in the mine were tied, and that if the agents were at liberty to go into any market to purchase coals Dolcoath during the last 20 years could have effected a saving of 20,000*l.*, to which add 5 per cent interest, it would have been a matter of 30,000*l.* in the pockets of the adventurers instead of in that of the Portreath Company.

Capt. THOMAS: You are going too fast.——Mr. RULE denied that he was. He read the letter that he had received from Mr. Pearce, in which that gentleman said he was glad to hear that the question of the coal supply to the mine was about to be taken up, he having for many years felt it to be an intolerable grievance and a gross injustice to the adventurers. He added—"I yield to nobody in the respect and esteem entertained towards Capt. Thomas and the agents, but their hands have been too much tied in this matter. I hesitate not to say that if they had been fully at liberty to have gone into the open market for coal they would have effected a saving of 1000*l.* a year during the last 20 years, this at 5 per cent. compound interest would have put over 30,000*l.* in your pocket instead of in the pockets of the Portreath Company. Therefore, you or any other person offering to supply coal at a cheaper rate ought to receive every encouragement, and so far as I have any influence shall readily receive my support." (Hear, hear.) Here, Mr. Rule pointed out, was a member of the committee actually writing that the managers' hands were tied, and his object was to give them every facility in the purchase of coal. He put the question whether the agents thought they could purchase coal cheaper direct from the collieries than they were now doing?

Capt. THOMAS: I dare say we can if we pay cash for it.

Mr. RULE stated that some time ago Mr. Pearce imported a cargo of coal into the mine direct from the colliery, and the engineman had told him that they had never since burnt a better quality. Yet those coals were condemned, and Mr. Pearce was allowed no chance to again import.——Capt. THOMAS: The coal was not condemned, it was put on duty, but was found to be too free in burning, and Mr. Pearce himself was fully convinced of that.

Capt. TEAGUE did not wish to be mixed up with bringing this question before the meeting, but would like to know what was the difference between Mr. Pearce's coal and the other coal.——Capt. THOMAS replied that he could scarcely tax his memory, but so far as he could remember there was scarcely any difference. He added that there was one thing in favour of the merchants, and that was that in summer time they would allow the agents to take in any quantity of coal they liked, even when it was at its lowest price, and then charge them for it when they used it. That was a great advantage.

Capt. TEAGUE suggested that it might be wisdom on the part of the agents to know each month beforehand what they would have to pay for coal in the ensuing month.

Mr. N. WEST did not believe that the merchants of Cornwall as a body desired a monopoly, but, on the contrary, were desirous of doing all they could in behalf of the mines.——Mr. RULE, notwithstanding that he did not believe anyone would go against his motion, which was—"That the manager be and hereby is requested to provide coals for the Dolcoath market in future, and to purchase the same of coalowners or proprietors at the cheapest market."

Mr. ROSEWARNE seconded the motion, saying he had been instructed to support such by a number of outside shareholders. He also read a letter from a Manchester lady shareholder, who expressed her belief that by the course of action desired by Mr. Rule being adopted the mine would be materially benefited.

Capt. THOMAS: If the resolution is passed the Portreath Company will ask us to pay them what we owe them.——Mr. SMITH: And cannot we do it?

Capt. TEAGUE: What do we owe them?——Mr. RICHARDS: About 7000*l.*

Capt. THOMAS: No, about 3000*l.*; you do not reckon what you will have to-day.

Mr. RULE: And you do not mean to say that the Portreath Company will come in and swamp us?——Mr. RICHARDS: They have never held out such a threat.

After some further discussion the resolution was amended "or the cheapest market," so as to allow the agents to go where they would to purchase, and it was then agreed to with unanimity.

Mr. CARTER asked what regulations affected the constitution of the committee in connection with the mine?——Capt. THOMAS replied that he had not studied the question.——Mr. CARTER urged that the constitution of the committee, and the length of time for which it was elected, were matters of considerable importance, and the present committee by no means represented the present shareholders, the great body of the outsiders having no representation at all. Since the committee had been formed there had been a large increase in the number of adventurers, and not more than one-fourth of them were represented, and this was a state of things he desired should be remedied. He, therefore, moved that two additional parties should be placed on the committee.

In the discussion which ensued the greatest confidence in the existing committee was expressed, and its members were all unanimously re-elected, Mr. Carter being ultimately prevailed upon to postpone his motion.—*Western Daily Mercury.*

A dinner was provided, when the Rev. W. W. BUTLIN again presided. After the usual loyal and patriotic toasts, and the "Lords of the Mine," had been drunk, the CHAIRMAN gave the toast of the day, "Success to Dolcoath, and the Health of the Agents." With respect to tin, he believed that very few, if any, knew anything about it. It was said that the Australians were getting all they could now to send with the wool, the freights being so low. Both the supply and demand appeared to be increasing. The present stock of tin was reported as 6280 tons, as against 3888 tons in 1874, and 1671 in 1873. The exports for the first two months of 1875 were 1749 tons; same period 1874, 1459 tons; and 1741 tons in 1873. The large demand he considered a favourable feature. With respect to the mine, they received splendid dividends in 1872, which should not be lost sight of when considering their present dividends. It was very pleasing to receive dividends, and to be connected with such a mine as Dolcoath. They had sunk 326 fms., and the mine had been working 200 years, and possibly 300 years. They were placing a boring machine and a stone breaker to work, and he believed that their agents left no stone unturned for the benefit of the shareholders, and they were much obliged to them. (Applause.)

Capt. THOMAS, the manager, in responding, was glad to say that the mine was still looking well. The bottom ends were looking well, and they had sunk the last 10 fathoms, although in winter, faster than they had ever done before, which intimated that their pitwork and engine were in exceedingly good working order. They had put the stone-breaker to work again, but with a separate engine this time. He did not, however, think that it would save anything enormous. They had also introduced a boring machine underground, but instead of compressing air at the surface as formerly, they would work it by water or some appliance underground, and he hoped it would now be much more successful. The machine was said to bore three times as fast and at two thirds the cost of manual labour. He scarcely knew what to think about the price of tin. Their friend, Mr. M. G. Pearse, in a letter to him, said he would not sell an ounce of tin at present prices, as he felt sure that within six months much better rates would be obtainable. He (Capt. Thomas) did not believe that the world could continue to produce tin for a little over 50*l.* per ton. (Hear, hear.)

Captain W. PROVIS followed, and said they were raising 5000 tons of stuff per month, and it was no easy matter to put this through the various processes and get 100 tons of tin a month ready for the market, as they were doing. In reference to the price of tin, all he could say was, "In every lowering cloud, look up and hope for better days."——Captain JOHN TONKIN said they had some of the hardest ground in the county to break, and he always thought of the boring machine, that it only wanted a Bolton and Watt to make it as successful as the steam-engine now was. They ought to encourage every improvement of the kind.——Capt. JOHN BAWDEN, the other agent, had been in Dolcoath 40 years, and being well acquainted with the mine he considered they had a good mine and a good dividend that day. He believed they were sending a ton of tin to the market cheaper than ever they had done before. (Applause.).—*Cornish Telegraph.*

THE VAN MINING COMPANY.

A general meeting of shareholders is to be held on Wednesday. The report of the directors states that the capital account is without change, everything being charged to current working, and the balance at credit continues to be 1111*l.* 6s. 1d. In the year 5600 tons of lead ore have been sold, realising 79,170*l.* 2s. 6d., an average of 14*l.* 2s. 9d. per ton, and 2050 tons of blende ore for 4090*l.*, an average of 1*l.* 19s. 10¾d. per ton. The total amount of working cost, including royalty, income tax, &c., is 50,376*l.* 16s. 10d., which, deducted from the receipts, leaves 32,991*l.* 1s. 8d. net profit upon the year's operations. In the year four dividends have been paid, together 2*l.* 2s. 6d. per share, and amounting to 31,875*l.*, carrying over 1116*l.* 1s. 8d., which, added to the sum of 664*l.* 4s. 11d. left over from 1873, raises the balance carried forward to 1780*l.* 6s. 7d.

Much anxious consideration has been given to the heavy cost of working the mine, and the directors are pleased to inform the shareholders that, by the introduction of new and improved machineey (which so far is working most satisfactorily), they hope to be enabled to very materially reduce the number of hands hitherto employed in dressing the ores, and thus very largely reduce the cost of that department: it will take a little time to complete all the contemplated changes, and until finished the full benefit cannot be realised. The works have been prosecuted with the greatest vigour throughout the year; the engine-shaft has been sunk a further 15 fms., the lode intersected in the 90 fm. level, and is, so far as seen from the limited amount of work done, highly mineralised, and of the most satisfactory character. Captain Williams will report fully to the shareholders at the meeting, which he will attend, and give the shareholders any information they may require.

WEST MARIA AND FORTESCUE CONSOLS.—A general meeting of adventurers was held at Glasgow, on March 12 (Mr. J. E. Watson in the chair), when the accounts and vouchers for five costs from Sept. 11 to Jan. 1 showed a debit balance of 761*l.* 3s. 7d. The meeting having considered the requirements of the mine for the next four months, a call of 1s. 6d. per share was made. The committee reported with regard to the suit that the arrangements for the arbitration had now been completed, and the referees appointed—Capt. Skewis as representing the mine, and Mr. Luxton as representing the Messrs. Willesford. Capts. William Skewis and Noah Coward say:—"No one can look at the mine and see the lode in the 93 west, in connection with other important shoots of ore from time discovered at such a comparatively shallow depth, without feeling deeply convinced that there is much more ore to be discovered in this property. In Gunnislake (Clitters) they sunk the shaft five successive levels (under where the ore made above), and opened them each over 70 fms. in length, without finding scarcely a ton of ore; and now in the two bottom levels they are opening up good lodes, which have sometimes been worth more than 100*l.* per fathom. In fact, the assistance of this has enabled them to pay two dividends, and from present appearances they are likely to be continued. West Maria is so situated, being so near the Devon Great Consols, and the ore so closely resembling theirs, and at no point has it been richer than in the 93 west, that we cannot but believe that deeper sinking is necessary."

WYE (Lead).—The final general meeting of this company was held at the liquidator's (Mr. J. J. Pyne) office, Bishopsgate-street Without, on Wednesday, when a statement was made, and the accounts presented, showing the manner in which the winding-up of the company had been conducted, and the property of the company disposed of.

SOUTH LLANHARRAN COLLIERY COMPANY.—The ordinary general meeting of shareholders was held at the offices, Cannon-street, on Wednesday—Mr. A. P. Barlow in the chair. The report, which was taken as read, stated that the necessary work of opening the colliery was being pushed forward very rapidly, the trial pit having not only yielded sufficient coal for supplying all the steam-power on the works, but also left a surplus, which found a ready local sale, as the quality of the coal was very good. The engineers' report gave a detailed account of the works done at the pits, which was of a satisfactory character, and held out much encouragement for the future prosperity of the company.—The Chairman, in moving the adoption of the report, expressed a hope that at the next meeting their works would be sufficiently advanced to enable him to lay before the shareholders results which would show the value of their property.—Mr. Henry Darvill seconded the motion, expressing, as a large shareholder in the company, much satisfaction at the prospects before them.—The resolution having been adopted, the retiring directors, Messrs. A. P. Barlow and H. Browse, jun., were re-elected, as were also the retiring auditors, Messrs. J. Waddell and Co.

'For remainder of Meetings see to-day's Journal.]

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho: Produce for February, 28 days, 33,500 ozts.; yield, 9·4 ozts. per ton.

CHICAGO (Silver).—Telegram from the company's superintendent at the mine: "Net profit for last month, $5000."

RICHMOND CONSOLIDATED.—Cablegram from the mine at Eureka, Nevada: "Hall, London—Week's run, $41,000."

LONDON AND CALIFORNIA.—Telegram from the agents in San Francisco: "Amador total receipts amount to $16,000; expenses, $7700; tons of ore crushed, 570; we remit 2000*l.*

MINERAL HILL (Silver).—Mr. Oakes, the superintendent at the mine, writes (Feb. 22): The mines continue to maintain themselves, and are looking about the same as last week: 30 tons of good ore have been raised from the Star Mine, with no change to notice in the face of the workings. The ore raised for the week is 85 tons, of an average grade of $48 per ton.

FULLER'S REEF (New South Wales).—Telegram: Trial crushing of 6½ tons from Whin shaft produced 19 ozs. of gold.

SIERRA BUTTES.—Result of the working at the Sierra Buttes and Plumas Eureka Mines for February:—Sierra Buttes: Receipts, $33,426; total California expenses, including cost of mining and milling, $19,841.—Plumas Eureka: Receipts, $32,003; total Californian expenses, including cost of mining and milling, $16,170.

JAVALI.—The directors are in receipt of advices from their manager, dated Feb. 6. He reports as follows:—Mine: About 40 varas have been driven, yielding 320 tons of quartz, at an average of ½ oz. per ton. About 1000 tons of quartz were taken from the stopes, yielding ¾ oz. average. The whole of the workings are in excellent condition.—Mill and Remittance: Our 20 stamps worked 23 days, crushing 1300 tons of quartz, giving the result of 855¾ ozs. of gold. The expenditure has been 795*l.*; the remittance is valued at 2394*l.*, thus leaving a profit of 1599*l.* for the month.

BATTLE MOUNTAIN.—Capt. Richards, Feb. 23: In Smith's winze sinking in the bottom of the 260 ft. level, north of the new shaft, the ground is hard, producing spots of ore only, but very promising. In the 260 ft. level, north of the new shaft, near Stevens's winze, we have had to, and still are, taking down some ground with view of stoping the back, putting in stull timbers, &c., for this purpose. The lode is large, containing a small quantity of ore of good quality, associated with gangue, which looks very promising, and I think will improve as we proceed, and if so this will be a point where more men can be advantageously employed, as also to sink a winze below this point if the ore proves to hold down, and I am taking on men as fast as I can get them. In the stopes in the 260 ft. level, north of the new thaft, near Cook's winze, the ore has materially fallen off, but I hope will improve again as we proceed. I shall continue to take on as many men as I can by any possibility work to advantage, and with economy, and trust this will be fully approved of by you. Should you at any time wish the number lessened we can do so, but there are some points which I think it important to prosper. I will have much pleasure in keeping you advised, and of increasing, if possible, to its utmost the returns or get of ore. The very (as yet) bunchy nature of the deposits, however, materially retards this, but everything will be pushed forward as fast as possible, and now progresses satisfactorily. Smith's winze is down 40 ft., and here two more men will be added as they come in. We raised 265 sacks during the week.

BLUE TENT CONSOLIDATED HYDRAULIC GOLD.—C. W. TOZER, Feb. 14: On the 10th inst. (Wednesday last) we fired a blast of 272 kegs of powder in the left-hand side of the South Yuba pit; it was the most severe "blow out" I ever saw, doing very little execution. The immediate cause was a misapprehension of the exact location of that old blast put in by our predecessors, Kilham and Co.; this weak point gave vent or escape for the immense amount of powder to blow out. The greatest damage it has done is to destroy our derrick mast and beam, together with 150 or 175 ft. of 15-in. pipe, and seriously damaging one monitor. This prevented any more washing for the present, and I thought it advisable to clean up the tunnel flume, the upper under current, and flume No. 3 I have just finished, and have it retorted; it weighs 195 ozs., valued at $3550; the balance of the flume would give at least $500 more, making the amount up to $4000. This I consider very good for the washing done—180 hours, or 7½ days, especially good when it is considered that nearly all the bottom gravel to the depth of from 2 to 10 ft., and a considerable portion of the back part of the blast that was well shook up, but not thrown down is not washed up. I know we have washed very little, of the time elapsed; this was unavoidable under the circumstances. We shall rapidly improve in this respect; in this case our tunnel and shaft were badly blocked by the blast, and twice filled up since, not from any lack of care and skill in working, but from caves from the main bank when water was off; this, together with the large amount of surface in proportion to the bottom washed has greatly retarded operations, and diminished results. I shall have the flumes put in order, and the monitors in position just as soon as possible. I think by the 19th or 20th to commence washing, and shall blast boulders, &c., until I can get a new derrick mast and beam up and in order, which will be about March 1 and 5. I cannot get along quite so fast, and it is more expensive, but I can make some headway. I will write again in a week, giving account of progress and more particulars, as I shall then have more time than just now. Washing is going on in the Enterprise quite favourably. I think there is fully as much money in the flumes now as when we last cleaned up.

E. B. Eddy, Feb. 24: Since my last I have been running in the Enterprise to the full capacity of water obtainable, which is only during the day; and occasionally I am obliged to shut down one head for a day, having no water for night-work; I am in hopes of getting a larger supply for our next run. I have the two monitors in position in the South Yuba claim, and have run for 30 hours up to the present time. I also have the derrick mast and boom on the ground, being framed, ready for erection by the last of this week; so that by Tuesday or Wednesday next I shall be able to make better progress at the South Yuba than heretofore. I shall explode a small blast of thirty kegs of powder on my return to the mine. This blast is for the purpose of breaking a hard run that lies in front of the back of the old Kelham blast. I have ascertained by run in a drift 40 ft. back, directly in front and in the centre of the pit, and by running cross-drifts on it, that there is quite a quantity of the bottom well broken up by the old Kelham blast. If I can break the rim in front of this—not over 25 ft. thick—I am confident of getting an abundance of gravel for another good run—a run of 15 or 20 days. I shall use every exertion to accomplish this much by April 10. Without any mishap or breakdown I can do it.

MALABAR.—G. B. O'Reilly, Jan. 28: Mine: We are now in a far better position than at any previous period, and in another month or two we ought to be in a condition to run steadily by day, and begin night-work as well. We have had, as the board know, immense difficulties to overcome, but we are now fairly getting into good ground, free from pipe-clay or boulders, and offering a prospect of good returns. Enclosed the board will find a summary of washing effected since our start on May 9. It will be observed that the number of hours run is extremely small in comparison to the time which has transpired. One half of the running has been on dead work, running off rubbish, pipe-clay, &c., taking these matters into consideration the produce of gold is high—$5100 per cent. And the period is now fast approaching when we expect to get this amount in one month, or perhaps less time. We have now got out of our difficulties, and as soon as our upper sluice is down we shall work to immense advantage. Mr. Anderson calculates that we can be washing on the high bank in two months if required, but as we have now some very good gravel near the head of our cut through bed-rock, and on the line R. 16, 17, 18 (see map), we may take a run off this ground before advancing in a hurry. Our upper sluice will run from R. 16 in a straight line for P. 22, and by putting in a short lateral branch sluice we can command a very great extent of good ground, including the north-west side of the hill R.S. 16, 17, which in this direction is over 100 ft. high, with only some 6 ft. of pipe-clay, all the rest being good gravel. Our next run will be necessarily interupted by the placing of sluice (upper) and the completion of our cut through bed-rock. This latter work is nearly finished, and should it be found at a future period that we have good gravel lower down than our present grade will admit of washing, we shall start a short tunnel from S. 13 to R. 16, which will give us over 25 ft. more grade. This tunnel, if undertaken, will cost but little, and will not interrupt the washing.

MALPASO.—C. Druitt, Jan. 28: The result of the clean-up referred to in the following advices has been 'announced by the telegram, which has been already published, dated Feb. 9. Since the date of my last letter (Jan. 18) the machine has been running the whole time, with the exception of a few hours yesterday occupied in shifting it further forward. We are now well into the high banks of gravel, as I expected directly we began again in their direction. We had an enormous cave of dirt, it came down last Thursday (the 21st), about 20,000 yards of gravel in one slide, and filled up half the space we had for working, but it was soon got rid of, and up to the present time we have washed as nearly as I can estimate 50,000 yards of gravel from the high banks, besides a large quantity from the lower. We have not yet come upon any large boulders in sufficient quantity to prevent our going ahead, as was the case when they tried to work into the high banks a little lower down a short time ago, but we find that the bed-rock rises very much and rapidly, inasmuch as to give us reason to believe that these high banks were left because they merely covered the rim rock, and the Spaniards went on working the other side; but anyhow there is any quantity of first-class dirt to be washed, and I am glad to say that the streak of pipe-clay that has given us so much trouble shows signs of being played out. While the machine was being shifted I took the opportunity to go down and thoroughly examine the sluice, and had the satisfaction of seeing a large quantity of good amalgam. Mr. Morley says that he has never seen it looking so well before.

CAPE COPPER.—Ookiep, Capt. Tonkin, Jan. 31: The shaftmen have completed the fixing of the skip-road to the 80, therefore we shall very shortly be in a position to start the bottom level south from shaft, and as soon as we have sufficient room in the deeper workings we shall push out another level south-east from flookan course. The 68, east from No. 13 winze, continued productive throughout the past month, and at the present time it is yielding moderately well. The 68, south from No. 15 winze, has not produced any copper ore lately. We have been disappointed in the yield of this level, but after a careful examination of the ground I have come to the conclusion in my own mind that the unproductive piece the level has passed through is a layer which is running almost horizontal, and this accounts for the driving having been in poor ground for some time; while I have no doubt a rise in back of the level, and a winze in bottom of the same, would reveal ore ground both over and under the unproductive driving. The 68 fathom level, north from No. 15 winze, is now being carried forward as a trial to prove a promising piece of ground north-east from the shaft. By reference to the plan it will be observed that there no drivages over this point in any of the upper levels. The stopes continue to yield the estimated quantity of copper ore, and, on the whole, the mine is looking well. In the ore-dressing department we are getting on moderately well, as we are treating a quantity of very low-class surface reserves with very good results. During the past month we started our new 11-inch repeating plunger to revolve water for the dressing-floors. This pump is being worked by the 30-inch engine, and it answers our purposes very well indeed. We have just now completed the fixing of pipes and connections for the drilling-machine, and started it to work; and, so far as tried, it is quite a success. The quantities of ore dressed during the past month are as follows:—775 tons from the mine, and 125 tons from the surface reserves.

Spectakel—Capts. Tonkin and Lanksbury, Jan. 26: We have suspended the driving of the 53 east from the bottom of incline, and put the men to make another trial west. All the deeper levels are very poor, but while we continue to keep the mine drained to the bottom we think it right to carry out trials from that point. The stopes throughout the mine have not undergone any changes worth noticing, excepting the one in bottom of the 97, east from flookan course, which has somewhat improved. There is a piece of ground between the 27 and 36, east of the flookan course, that I consider to be worth a good trial. The returns for the month comprise 30 tons from the mine and 10 tons from the surface reserves.

Trial Mines—Capt. Tonkin, Jan. 15: Karolusburg: In bottom of the shaft, sinking below the 10, we have several small branches of good quality copper ore, and we hope it will lead to something of value in depth. The 10, east from shaft, is yielding some good stones of rich purple copper ore, and altogether this end is looking more promising than for some time past.—New Centre, near Kilduncan: The level driving from the bottom of the stope at Kilduncan continues to yield a little copper ore, but there is no favourable change to notice.—Narrap: At Narrap Mine we have fixed the machine referred to in last report, and the men are now engaged in cutting down the shaft, so that we hope shortly to commence the sinking.—New Centre, at back of Ezels Fontein: During the past month we took some good stones of red oxides of copper from the workings, but whether the productive ground will continue in depth or otherwise remains to be proved.—A party of 17 miners, sent from England per American steamer, has arrived ont.—Returns for January, 1875: Ookiep, 860 tons of 30 per cent.: Spectakel, 38 tons of 35 per cent. Railway traffic for six weeks ending Feb. 6, 447 tons up and 1170 tons down.—Bills of Lading Received: 205 tons of ore per American steamer, 515 tons per Galatea, and 205 tons per Roman.—Arrival at Port Nolloth: The Tacna, with outward cargo, and to load about 600 tons of ore.—Arrival at Swansea: The Alton.—Sales by Public Ticketing: 900 tons of ore on Feb. 23, at an average of 16s. 6½d. per unit, realising approximately 23,700*l.*—Put forward for Sale: 660 tons of ore on the 23d inst.—Dividend Declared: 20s. per share, free of income tax.

[For remainder of Foreign Mines, see to-day's Journal.]

HARDENING AND APPLICATION OF GLASS, &c.—Mr. J. MACINTOSH, of Westminster, civil engineer, has patented the hardening of glass, graphite, slag, and other analogous substances, in moulds reduced by refrigeration to the lowest attainable temperature, and using such hardened substances as substitutes for diamonds and diamond dust; also hardening the points of cutters, drills, and saws in like manner.

MORE CURES THIS WEEK OF COUGHS, COLDS, AND THROAT AFFECTIONS BY DR. LOCOCK'S PULMONIC WAFERS.—From Mr. Williamson: "49, Hunslet-road, Leeds: Dr. Locock's wafers have a direct action on the affected parts, and immediately allay pulmonary irritation." They give instant relief of asthma, consumption, coughs, colds, and all disorders of the breath and lungs. They have a pleasant taste. Price 1s. 1½d. per box. Sold by all medicine vendors.

FOREIGN MINING AND METALLURGY.

The slight tendency to improvement which has appeared in the French iron trade may be said to be sustained, and an important revival in affairs is now hoped for. Refining pig, charcoal-made, maintains an average of about 4*l.* 16s. per ton; pig for second fusion is now in no great demand. Orders for iron begin to re-appear, and there is now little to complain of as regards sheets and machine iron. The foundries have generally few orders on hand. In the Nord heavy plates are quoted at 10*l.* 16s. per ton. In the Meurthe-et-Moselle the average quotation for pig is 3*l.* 0s. 10d. per ton. The great works in the Rhône basin do not want employment; renewal of way and improvement of rolling stock suffice to keep them going tolerably well. First-class rolled iron is quoted officially upon the Lyons bourse at 9*l.* 8s. per ton; there has been a slight advance in consequence of a pretty well sustained demand. A contract has been concluded at Paris for steel rails for Spain; some French, Belgian, and English firms competed for this contract, which was obtained by the Terrenoire Works. M. Dupont has assumed the business of the Dupont and Dreyfry Company, which has been dissolved. M. Dupont has associated with him in the management of the undertaking his nephew, M. Fould, and the new firm will conduct its business under the style and title of Dupont and Fould. The firm will carry on the Pompey blast-furnaces and rolling-mills, the Champigneulles blast-furnaces and foundries, and the Apremont Ironworks.

As regards the Belgian coal trade, it may be observed that there is now rather a considerable difference between the rates current in the Liége and Charleroi districts. Liége coal being the cheapest is, accordingly, being introduced into ironworks in the neighbourhood of Charleroi; it may be observed that Liége coal is also cheaper than that available in the Centre district. It is probable that between this date and May coal quotations will be established in Belgium upon a more stable and rational basis. At present, needy firms and companies are selling coal at lower rates than their neighbours; there is, unfortunately, no official or even semi-official quotation for coal. A discussion has arisen in Belgium recently as to the utility of chambers of commerce; the general feeling appears to be in favour of their continuance, their avowed object being the defence of the industrial, commercial, and maritime interests of the country.

Copper has ruled rather feeble at Paris. Chilian in bars has made 87*l.*; ditto ordinary descriptions, 85*l.*; ditto in ingots, 91*l.*; English tough cake, 90*l.*; and pure Corocoro minerals, 86*l.* per ton. Copper has been rather weaker this week upon the Marseilles market. In Germany transactions have been more restricted in copper, and they are now confined to the strict requirements of consumption. We learn from Rotterdam that the Dutch Society of Commerce will offer for sale at the close of this month 25,800 blocks of tin, of which 8600 blocks are deposited at Amsterdam, 13,000 blocks at Rotterdam, 1200 blocks at Dordrecht, and 3000 blocks at Amsterdam. The fall noticed recently in tin has made further progress upon the Dutch markets, in consequence of forced sales on the part of several speculators. Banca has given way to 52 fls., and Billiton to 49½ fls. At Paris, Banca, delivered at Havre or Paris, has made 100*l.* per ton The Germen tin markets have ruled rather quiet, upon the whole Lead has exhibited some weakness at Paris; the German lead markets have also been heavy. Quotations for zinc have been rather irregular at Paris; rolled Vieille-Montagne zinc has fallen to 30*l.* per ton. The German zinc markets have presented little animation; prices have experienced no variation.

The political condition of France having improved there is now some hope of an early and serious revival in affairs. The French coal trade has still, however, remained quiet, prices have experienced no sensible variation, and transactions have continued inconsiderable. In the Pas-de-Calais, however, a slightly downward tendency has appeared as regards some descriptions; on the other hand, other qualities have remained firm in the same basin. In the Rhône basin, although a reduction was recently noted in quotations, purchasers have continued to maintain an attitude of reserve. In the Loire basin the quotation for washed coke, best quality, has been 1*l.* 11s. 2d. per ton, while coke for metallurgical purposes has realised 1*l.* 2s. 6d. per ton. At Paris transactions have been limited to the current requirements of consumption, and prices have not varied. In consequence of the increasing dearness of pitwood the use of iron is extending in French coal mines.

The Belgian iron trade can scarcely be called firm; it will probably remain in a hesitating and uncertain state so long as the differences existing between English ironworkers, coal miners, and their employers remain unadjusted, meanwhile, pending settlement of the English disputes, the proprietors of the Belgian works complain of the few orders which present themselves, and also of the low prices at which they are compelled to deliver their products. Applications for information are made freely enough, but orders are still somewhat few and far between. At an adjudication of rails for Dutch lines which took place recently at Amsterdam, the lowest tender submitted for iron rails with fish-plates was 9*l.* 10s. 6d. per ton. These were the terms offered by the Acoz Works, which distanced on the occasion all German and English competitors. A contradiction is given to the report that the John Cockerell Company had received an order for 10,000 Bessemer steel tyres on English account. The Cockerell Company has, however, been forwarding during the last few months considerable quantities of tyres to England. Another report which had gained currency to the effect that the Cockerell Company had received from Russia an important order for locomotives is also without foundation. MM. Gillieaux, of Charleroi, have introduced into their works some differential rolling-mills for plates on the Louth and Deby system. The same firm have also decided on making a trial of a Pernot furnace.

BELGIAN IRON.—A statement that the John Cockerill Company had obtained a contract for 10,000 Bessemer steel tyres for England is inexact. The company is executing a large order for steel tyres, but has not obtained any fresh contract of this description.

AUSTRALIAN MINES.

PORT PHILLIP AND COLONIAL (Gold).—Jan. 26: Quantity of quartz crushed for the four weeks ending Dec. 30, 3035 tons; pyrites treated, 18 tons; total gold obtained, 645 ozs. 3 dwts., or an average per ton of 4 dwts. 6 grs.; receipts, 2559*l.* 17s. 1d.; payments (including 1231*l.* paid for firewood and mine timber, and insurance on plant, &c.), 3371*l.* 12s. 4d.; debit balance, 811*l.* 15s. 3d., which, deducted from last month's credit balance of 1670*l.* 10s. 7d., left an available balance of 858*l.* 15s. 4d., which was carried forward to next month's account.

SCOTTISH AUSTRALIAN.—The directors have advices from Sydney, dated Jan. 23. The sales of coal from the Lambton Colliery for the month of December amounted to 8069 tons, making for the half-year ending Dec. 31, 56,131 tons. So far as the month of January had proceeded the manager reports a decided improvement in the company's trade.

ANGLO-AUSTRALIAN (Gold).—Mr. Clark (January 26) writes: Although our actual liabilities are only about 35*l.*, still we shall be compelled to expend some 50*l.* in timber before the mine will be in thorough order, and I trust you will send as much money as you possibly can monthly for some little time yet, as Capt. Raisbeck informs me we must not expect any profitable results for at least four months to come.—Capt. Raisbeck writes: I have the honour to report progress since the 30th ultimo.—East cross-cut 320 ft. level: We have extended this drive 6 feet; on account of extra work in the winding shaft, and the holidays, the men have only been occasionally in this drive; present distance from shaft 67 feet. We have put in a good tram-road for 60 feet. The country is strong and full of water, and will continue so for about 70 ft.; we shall then have a favourable change in the country for quartz. On the 8th inst. we commenced to haul with the winding machinery. I am proud to say it answers all expectations; in fact, it is the best mining apparatus in the district.—Cross-cut 200 ft. level: The contractors have driven 34 ft.; they are through the sandstone bar, and now getting into a favourable country for quartz and gold; they struck quartz this morning. I could see gold in the stone, but cannot as yet speak to the value; distance from shaft 130 ft. We have 120 ft. of tram-road in this level.

AUSTRALIAN CENTRAL GOLD.—Mr. Gill, Fryerstown, Jan. 27: "The information contained in your letter No. 15 advises me that the sum of 2000*l.* would be probably available, which sum you consider sufficient to pay off liabilities, and to carry out the deep level. The margin shown for mine work is a much too narrow one, and I cannot, as I much wish, provide for my winter's stock of timber, which, as I stated in my last, is of great, almost vital, importance; still, if that amount can be raised and sent out to me by instalments of 200*l.* per month for mine work exclusively, with some additional cash now and again to meet in part the present liabilities, I think I may pull through, but it will be a difficult task. My principal aim is to get to and open up the deep ground. That end attained I can meet future dead work from the proceeds of the mine—*the main* drawback being I cannot open up the mine, with a view to future operations, with the means at my disposal. I must simply do the best I can. Should, however, the results from the deep ground be as I anticipate, I can then make the necessary arrangements for opening up as I wish. The mine, after lying idle so long, will require some repairs, as well as the shaft. When these are completed I shall push on the works as vigorously as I can, but I trust you will endeavour to keep me supplied with funds."

YORKE PENINSULA.—The directors have advices from the committee of inspection at Adelaide, dated January 29, with reports from the Kurilla Mine to the 25th. Capt. Anthony reports that the new engine-shaft (Grainger's), west of Deeble's, which is being sunk with all dispatch, with the object of getting at and raising the ore in the 25 fm. level, west of Deeble's, would be completed, lined, and laddered by about the present time. The 25, east of Hall's, going towards the new discoveries, has been driven 10 fms. since the resumption of driving in December last. Capt. Anthony states, "The lode has increased in width from 3 to 5 ft. It is now beginning to yield a small quantity of payable black ore, and there is every prospect of further improvement. The 15 is also driven 10 fathoms; the lode has widened from 2 to 4½ ft., and will yield from 1 to 2 tons of 15 per cent. ore to the fathom; this favourable change has occurred during the past week, and I am hopeful of still further improvement. . . . The air-shaft, 18 fms. east of Hall's shaft, is holed to the 15, and two men are opening out the lode prior to offering it on tribute, and the ore being raised is sufficient to pay their wages." A new shaft is also being sunk at a point 10 fms. east of the end of the 15, east of Hall's shaft, for ventilation and discharge, and "to facilitate the raising of the ore now being laid open in the 15, and which will, no doubt, extend to the 25, to which such shaft will be sunk in due time." The cross-cut north of Trial shaft A (first new discovery, and on old lode) was being continued towards new lode, with the object of intersecting any branches that may lie between the two. The trial pit No. 1, on the new lode, 33 fathoms north of A, is down 12½ fathoms: the lode in the bottom is about 3 ft. wide, not rich, but a paying lode, and from the progress made no doubt can be felt of its making a good lode as soon as we have the necessary means of pumping the water and sinking deeper. Captain Anthony intended to continue the drive west in the 10 on the course of the lode, and so to connect the trial pit No. 1 with the other trial pits, Nos. 2, 3, and 4, with the view of letting the ground on tribute; this drive will extent 33 fms. Also to drive the 10 east of No. 1, where the best part of the lode discovered was standing. A pitch was being worked in the back of the 25, east of Hall's, on tribute at 10s. in 1*l.*; about 30 tons of ore of about 12 per cent. were at grass. The engine and pit-work doing well, and the report concluded as follows: Should the ore in the lode at the 15 and 25, east of Hall's shaft, connect with ore indicated by the surface deposit at trial shaft A to make in depth there, and the new lode above the 10 yields as well as may be reasonably expected, I shall soon begin to meet a considerable portion of the outlay by sales of ore.

ENGLISH AND AUSTRALIAN COPPER.—Port Adelaide, Jan. 30: The quantity of coal in stock at Port Adelaide was about 1183 tons. All the furnaces and refineries both at Port Adelaide and Newcastle were in full work. Since date of last advices about 180½ tons of copper had been shipped.

FORMATION OF MINERALS.—A remarkably instructive example of the recent formation of metallic minerals, such as those often found in copper lodes, has recently been brought under the notice of the French Academy by M. Daubrée. During the drainage of a well at the hot springs of Bourbonne-les-Bains (Haute Marne), the muddy botttom was laid bare, and found to contain a number of Roman coins, statuettes, and other objects in bronze, silver, and gold. But immediately below this level the workmen came upon a bed made up of fragments of rock, chiefly sandstone, cemented together by certain metallic sulphides, which, in many cases were well crystallised. They included examples of copper pyrites, *Buntkupfererz* or "horseflesh ore," copper glance or sulphide of copper, and, what was most notable, tetrahedral crystals of a double sulphide of copper and antimony identical with certain varieties of *Fahlerz*. The minerals appear to have been formed by the reduction of metallic sulphates, through the agency of vegetable matter, and to have been precipitated among the fragments of stone which they have cemented into a breccia. The thermal waters issue from the New Red Sandstone at a temperature of about 60° C. It can be proved that the formation of these minerals cannot have extended beyond 16 centuries—*Athenæum*.

NEW FUEL.—Col. BYRON, of New York, for a new and improved fuel for metallurgical and other purposes, proposes to desulphurise and dephosphorise coal or its refuse when placed in union with any other substance or substances. The production of solid hydrocarbon by the union of hydrogenous and carbonaceous substances, when the said substances are created chemically and mechanically.

IMPROVED FILTER.—Messrs. J. and A. OUTERSON, of Windsor Locks, Hartford, Connecticut, U.S., have invented an improved filter for water and other liquids that do not act distructively in the material. The material is disintegrated paper stock washed clean, preferably made by cutting, boiling, washing, and bleaching rags, or fer paper making, though other material, as jute, flax, hemp, rope, and the like can be used. The medium is put into a vessel with a strainer bottom and the water run through it, there being a ledge or shelf all around the inside of the vessel to catch any sand or grit which may work down at the sides.

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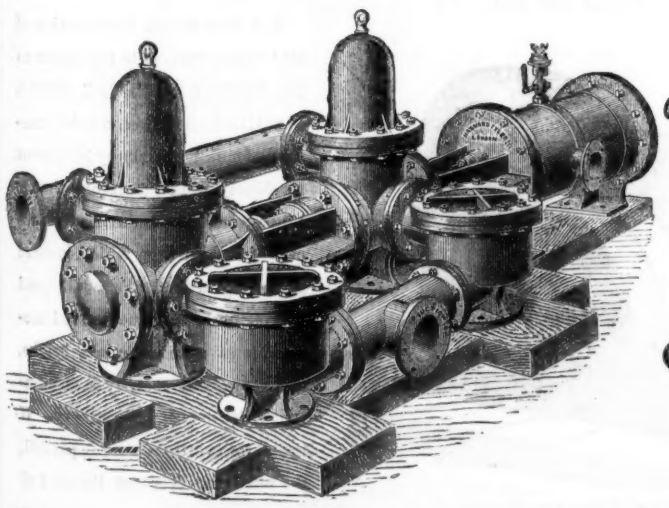

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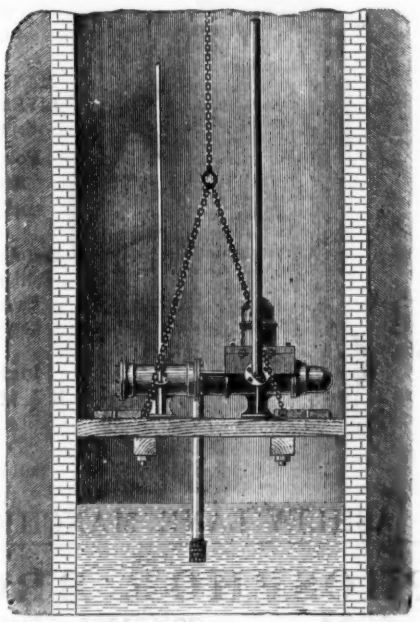

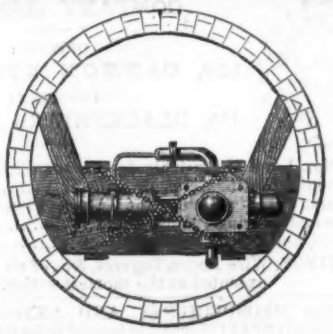

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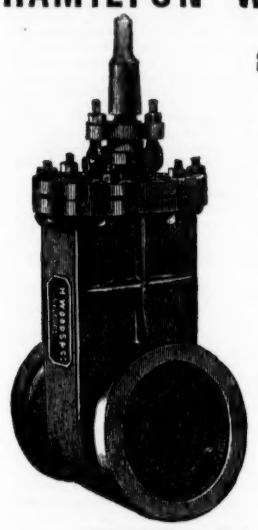

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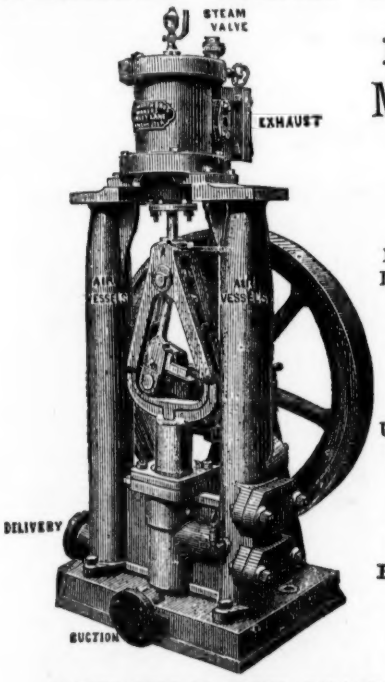

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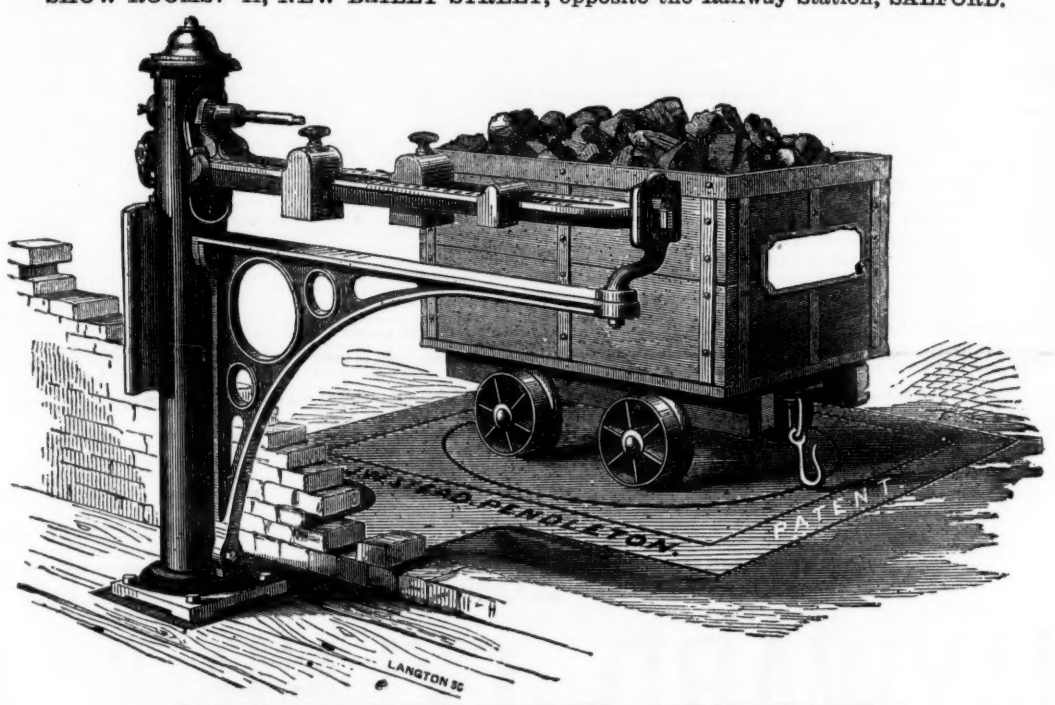

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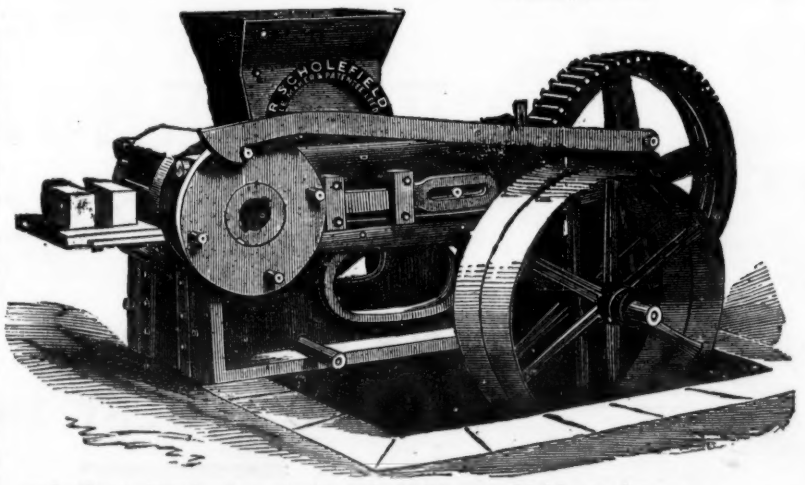

R. S. begs to call the attention of all Colliery Owners in particular to his PATENT SEMI-DRY BRICK MACHINE, and the economical method of making bricks by his patent machinery from the refuse that is taken from the pits during the process of coal-getting, which, instead of storing at the pit's mouth (and making acres of valuable land useless), is at once made into bricks, at a very small cost, by R. S.'s Patent Brick-making Machinery. If the material is got from the pit hill, the following is about the cost of production, and the hands required to make 10,000 pressed bricks per day:—

2 men digging, each 4s. per day	£0 8 0
1 man grinding, 4s. 6d. per day	0 4 6
1 boy taking off bricks from machine, and placing them in barrow ready for the kiln, 2s. per day	0 2 0
1 boy greasing, 1s. 6d. per day	0 1 6
1 engine-man, 5s. per day	0 5 0
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Total cost of making 10,000 pressed bricks	£1 5 0, or 2s. 6d. per 1000.

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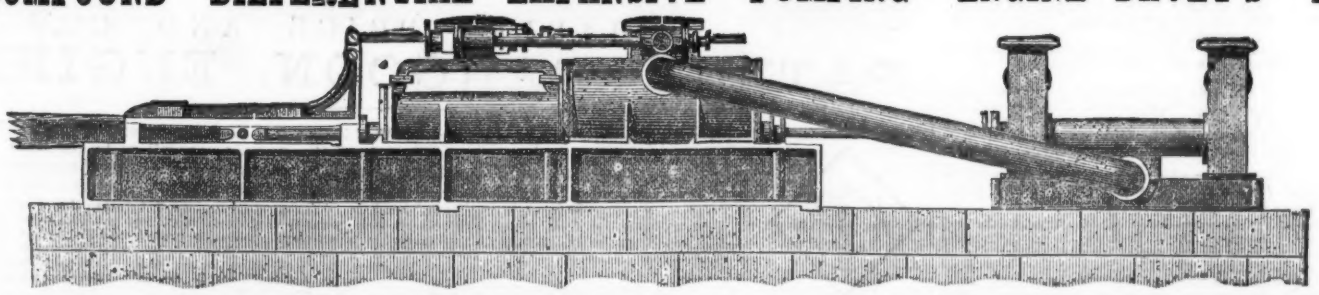

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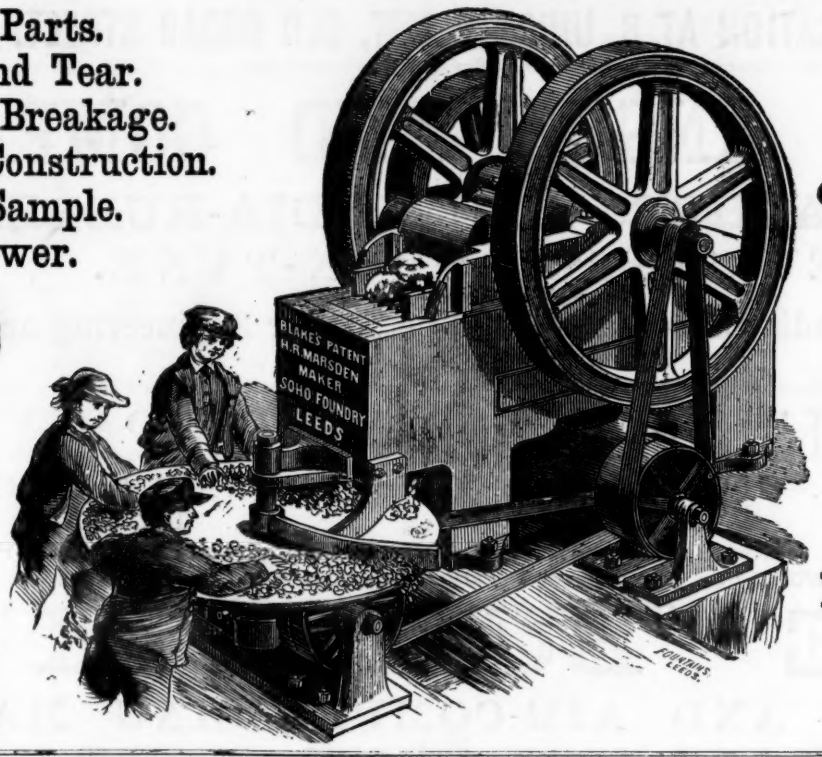

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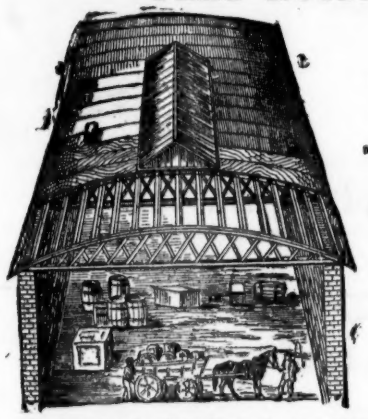

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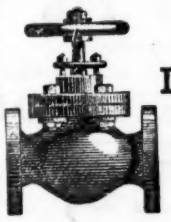

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